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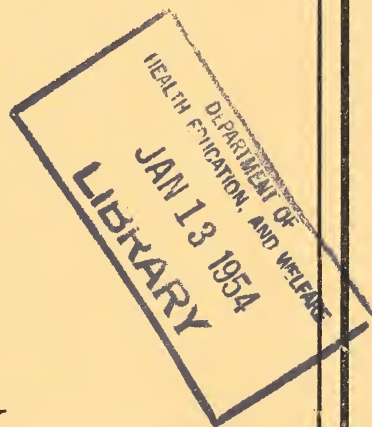
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Foreword

IN order that the *American Journal of Physics* may be used effectively, an index covering more than one year at a time is necessary. It is even more necessary than it would be in the case of a journal of similar size in which much original research was reported, for the reason that developments in teaching do not follow as simple or as easily remembered a chronological pattern as developments in research.

Grateful acknowledgment to the National Science Foundation, which defrayed approximately 60 percent of the total cost of production of this index, is hereby made by the American Association of Physics Teachers and by other subscribers to the *Journal*. The balance of the cost was borne by the American Association of Physics Teachers itself.

The majority of the work required in the preparation of this 20-year cumulative index fell on the

shoulders of Dr. B. H. Dickinson, Assistant Editor of the *American Journal of Physics*, who spent the equivalent of many months on the task. In organization and in typing, he was generously aided by Mrs. Dora Murphy, who recently concluded a three-year period of valuable service as secretary to the Editor of the *American Journal of Physics*. She, in turn, was assisted in the mechanical details by Miss Nancy Heuer and Miss Jane Turner.

All these individuals join the Editor in the hope that this 20-year index will serve its purpose in making the volumes of the *Journal* much more useful to their owners than they have been in the past.

THOMAS H. OSGOOD
Editor

July 6, 1953
East Lansing, Michigan

How to Use This Index

THIS Cumulative Index is intended to provide ready reference to all material published in the *American Journal of Physics* in Volumes 1 (1933) to 20 (1952). Since the system of indexing the early volumes differed from that used for later ones, a completely new index has been prepared. By its use the searcher should be able to locate the name of any contributor to the *Journal* or the title of his contribution.

The Index is subdivided into two parts: an Author Index listing the names of the contributors of papers, notes, letters, book reviews, and abstracts of addresses; and an Analytical Subject Index listing the titles of papers, notes, letters, book reviews, addresses, and digests of periodical literature. The Author Index lists the names of contributors alphabetically; the Analytical Subject Index lists the titles of contributions according to a Classification of Subjects to be found on page 2 of this Index. Since most papers and addresses

can be classified under more than one of the categories listed, multiple listing of the titles has been employed in preference to a system of cross references, with the expectation that the Analytical Subject Index will be easier and quicker to use.

Location of the original contribution to the *Journal* may be made by use of the volume, page, and year-of-publication numbers following each item in the order indicated. Thus a listing, 17: 324—1949, signifies Volume 17, page 324, year 1949. In the case of an abstract of a paper or address, the Letter (A) follows the page number; similarly the letter (L) denotes a Letter to the Editor and the letter (T) designates an item published only by title. Contributions to the Regular Section and the Notes and Discussion Section of the *Journal* are not specially designated. The form in which Book Reviews are listed is such that their nature is immediately apparent.

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Location of the original contribution to the *Journal* may be made by means of the volume,

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- Roland Roy Tileston, presentation of the 1943 Oersted Medal of the American Association of Physics Teachers to, Lloyd W. Taylor. **12**: 96—1944; remarks by Gordon Ferrie Hull. **12**: 97—1944; Communication from Professor Tileston. **12**: 97—1944; biography of Roland Roy Tileston, A. G. Worthing. **12**: 93—1944
- Homer Levi Dodge, presentation of the 1944 Oersted Medal for notable contributions to the teaching of physics to, A. A. Knowlton and Lloyd W. Taylor. **13**: 120(T), 178—1945; response by Dr. Dodge upon acceptance of the ninth award of the Oersted Medal, January 20, 1945, Homer L. Dodge. **13**: 179—1945
- Ray Lee Edwards, presentation of the 1945 Oersted Medal for notable contributions to the teaching of physics to, R. C. Gibbs and Lloyd W. Taylor. **14**: 108, 136(T)—1946; New challenge to the physics teacher, R. L. Edwards. **14**: 110—1946
- Duane Roller, presentation of the 1946 Oersted Medal of the American Association of Physics Teachers to, Lloyd W. Taylor and R. C. Gibbs. **15**: 176, 195(T)—1947; Approach to the study of physical terminology, Duane Roller. **15**: 178, 195(T)—1947; announcement of Oersted Medalist for 1946, Lloyd W. Taylor. **14**: 447—1946
- William Harley Barber, presentation of the 1947 Oersted Medal of the AAPT to, R. C. Gibbs and Paul Kirkpatrick. **16**: 121(T)—1948; address of citation, R. C. Gibbs. **16**: 105—1948; Forty years of physics at Ripon College, William Harley Barber. **16**: 107, 121(T)—1948; announcement of the Oersted Medalist for 1947, R. C. Gibbs. **15**: 515—1947
- Arnold Sommerfeld, presentation of the 1948 Oersted Medal for notable contributions to the teaching of physics to, **17**: 456—1949; address of citation, Paul Kirkpatrick. **17**: 231(T), 312—1949; acceptance on behalf of Professor Sommerfeld, E. U. Condon. **17**: 231(T)—1949; Some reminiscences of my teaching career, A. Sommerfeld. **17**: 315—1949
- Orrin Harold Smith, presentation of the 1949 Oersted Medal of the AAPT to, Paul Kirkpatrick and J. W. Buchta. **18**: 332(T)—1950; address of recommendation, Paul Kirkpatrick. **18**: 254—1950; Experience plus realization, Orrin H. Smith. **18**: 256, 332(T)—1950
- John W. Hornbeck, presentation of the 1950 Oersted Medal of the American Association of Physics Teachers to, Duane Roller and J. W. Buchta. **19**: 328(T), 411—1951; Some reflections on the teaching of physics, John W. Hornbeck. **19**: 328(T), 412—1951
- A. A. Knowlton, presentation of the 1951 Oersted Medal of the American Association of Physics Teachers to, Duane Roller. **20**: 267, 196(T)—1952; Opportunities and rewards in physics teaching, A. A. Knowlton. **20**: 271, 396(T)—1952
- Richtmyer Addresses*
- War problems of the physics teacher—first Richtmyer memorial lecture of the Association, Arthur H. Compton. **10**: 53(T), 92—1942
- New spirit in American physics—second Richtmyer memorial lecture of the Association, Gordon Ferrie Hull. **11**: 23, 112(T)—1943
- Future of physics, past and present—third Richtmyer memorial lecture, Karl K. Darrow. **12**: 55—1944
- Radiofrequency spectroscopy—fourth Richtmyer memorial lecture, I. Rabi. **13**: 120(T)—1945
- Technological research in the university—fifth Richtmyer memorial lecture, Paul E. Klopsteg. **14**: 136(T), 165—1946
- Present status of atomic physics—sixth Richtmyer memorial lecture, J. R. Oppenheimer. **15**: 195(T)—1947
- New frontiers—seventh Richtmyer memorial lecture, Homer L. Dodge. **16**: 121(T), 209—1948
- How World War II has affected the science of physics—eighth Richtmyer memorial lecture, Lee A. DuBridge, **17**: 231(T)—1949; review by T. A. Rouse, **17**: 335(T)—1949; Effects of World War II on the science of physics, Lee A. DuBridge, **17**: 273—1949
- Landmarks in the theory of magnetism—ninth Richtmyer memorial lecture, J. H. Van Vleck. **18**: 332(T), 495—1950
- Electron theory of solids—tenth Richtmyer memorial lecture, John C. Slater. **19**: 328(T), 368—1951
- Large cyclotron research at the University of Chicago—eleventh Richtmyer memorial lecture, Enrico Fermi. **20**: 396(T)—1952
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- Can physics serve two masters? F. W. Loomis. **18**: 332(T)—1950
- Electron emission from metal surfaces, L. A. DuBridge. **16**: 191—1948
- Fields and quanta, J. R. Oppenheimer. **17**: 231(T)—1949
- Franck-Condon principle and related topics, E. U. Condon. **15**: 195(T), 365—1947
- Molecular beam researches in nuclear and electronic physics, I. I. Rabi. **19**: 328(T)—1951

- Outlook for the physicist and prospective physicist in industry, Albert W. Hull. **12**: 62—1944
- Pitch, loudness, and quality of musical tones, Harvey Fletcher. **14**: 136(T), 215—1946
- Some investigations of light nuclei, Charles C. Lauritsen. **20**: 396(T)—1952
- Twenty-five years of mass spectroscopy, A. J. Dempster. **13**: 120(T)—1945
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- Acoustical*
- Acoustic interferometer, K. J. Metzgar. **19**: 482(A)—1951
- Audio-frequency generator for laboratory use, R. R. Ramsey. **5**: 224—1937
- Audio-oscillator having an air-core inductance coil, Charles Williamson. **5**: 135—1937
- Crova disks for projecting slow motion longitudinal waves, Joseph H. Howey. **12**: 213—1944
- Demonstration phonodeik, G. G. Kretschmar. **4**: 90—1936
- Electronichord, Noel Urquhart. **2**: 29—1934
- From simple harmonic to wave motion, C. J. Overbeck. **20**: 325(A)—1952
- Kundt tube apparatus, Myron B. Reynolds. **11**: 235(A)—1943
- Measuring the velocity of sound and acoustic absorption coefficients, apparatus for, Arthur Waltner. **16**: 231—1948
- Miniature Kundt tube, Howard S. Seifert. **7**: 421—1939
- Modified form of phonodeik, J. Edmond Shrader. **6**: 269—1938
- New form of sound resonance tube, George Winchester. **10**: 196—1942
- Practical hearing aid for classroom use, G. W. Fox. **5**: 177—1937
- Projecting phonodeik oscillations, apparatus for, J. G. Black. **1**: 21(T), 49—1933
- Reviving the sonometer, Thomas H. Osgood. **4**: 141—1936
- Self-sustaining electronichord, W. David Bemmels. **17**: 515—1949
- Shock tube and its functions, Walter Bleakney and Wayland C. Griffith. **19**: 486(T)—1951
- Simple acoustical model of the Čerenkov phenomenon, P. Selényi. **17**: 581(L)—1949
- Simple low power audio-frequency oscillator, Sanford C. Gladden. **5**: 230—1937
- Simplified apparatus for the measurement of the velocity of sound, Arthur Waltner. **15**: 362(A)—1947
- Standing waves, apparatus for demonstrating, Marvin J. Pryor. **13**: 110—1945
- Stroboscopic ripple tank as a teaching aid, Clarence A. Dyer. **5**: 208—1937
- Two new wave models, Harold K. Schilling. **15**: 197(A)—1947
- Vibrating rods as laboratory sources of sound, E. H. Johnson. **8**: 265(A)—1940
- Visual sonometer for student use, Carl E. Howe. **5**: 46(T)—1937
- Wave machine and a device for compounding two simple harmonic motions, H. W. Farwell. **7**: 406—1939
- Electrical*
- Absolute ampere current balance for laboratory use, H. V. Neher. **20**: 358—1952
- A.c. operated photoelectric relay, J. J. Coop. **6**: 334—1938
- A.c. voltage supply for spectrum tubes, E. H. Green, K. H. Fried, and W. H. Mais. **8**: 197—1940
- Alternating-current stroboscope, Grant O. Gale. **7**: 415—1939
- Attachment for wall galvanometer telescope holder, Willard H. Eller. **7**: 198—1939
- Automatic chart plotter for lecture room demonstrations, Alfred O. Nier and R. B. Thorness. **19**: 416—1951
- Capacitance operated relay, David Bailey. **8**: 265(A)—1940
- Charge-discharge key and timer, Willard H. Eller. **3**: 188—1935
- Convenient projection electroscopes, John J. Heilemann. **2**: 28—1934
- Current balance, F. W. Warburton. **4**: 50(T)—1936
- Current doubler, F. B. Pauls. **15**: 360(T)—1947
- Cyclotron model, E. E. Grassel. **12**: 53(A)—1944
- Demonstrating a.c.-d.c. voltage relationships, simple apparatus for, Leo Seren; **16**: 449—1948
- Demonstrating an induced electromotive force, new apparatus for, Hermann Haemmerle. **17**: 317—1949
- Demonstrating and mapping an electric field, apparatus for, Rev. B. Brinker. **18**: 318(T)—1950
- Demonstration potentiometer, P. Bender, **15**: 435(A)—1947
- Design of an apparatus for cathode sputtering, James A. Darbyshire. **1**: 90(A)—1933
- Device for rapid and automatic recording of electrostatic fields, Albert D. Ehrenfried. **12**: 371—1944
- Double ionization chamber for electrometers, Carl T. Hibdon. **11**: 234(T), 286—1943
- Double purpose brackets for a d'Arsonval galvanometer, I. A. Balinkin. **3**: 132—1935
- Driver for the Calthrop resonance pendulum, Paul F. Bartunek. **18**: 521(A)—1950; **19**: 57—1951
- Electric arc welder for the small shop, Clyde A. Crowley. **1**: 124(A)—1933
- Electric circuit analysis boards, C. R. Fountain. **4**: 132—1936
- Electric field-mapping apparatus, C. J. Overbeck. **16**: 123(A), 186—1948
- Electric wiring and apparatus board, J. T. Peters. **7**: 137—1939
- Electrical analog computers, solution of differential equations by, Joseph L. Ryerson. **19**: 90—1951
- Electrolysis and synthesis of water and the photosynthesis of HCl, apparatus for, J. G. Black. **1**: 55(T), 119—1933
- Electrolytic cells, Merle Randall. **7**: 292—1939

- Electrostatic bubble gun for demonstrating deflection of charged particles, L. P. Delsasso. **15**: 360(T)—1947
- Electrostatic pendulum, J. A. Van den Akker. **3**: 72—1935
- Electrostatic voltmeter, Milton Y. Warner. **2**: 75—1934
- Elementary experiment on the potentiometer, auxiliary apparatus for, Sanford C. Gladden. **5**: 134—1937
- Experiments with a unipolar generator and motor, R. J. Stephenson. **5**: 108—1937
- Fractional-volt cell, W. James Lyons. **7**: 136—1939
- Frank-Hertz experiment, tube for, Robert Hofstadter. **10**: 112—1942
- Foolproof Geissler tube holder, Donald P. LeGalley. **6**: 214—1938
- Glow tube flasher for demonstrating condenser properties, V. Wouk. **13**: 415—1945
- High-frequency electromechanical filters, C. R. Mingins, S. Bartnoff, and L. A. Howard. **20**: 395(T)—1952
- High-frequency induction furnace and high-frequency, high voltage induction coil, James L. Winget and Frank M. Durbin. **9**: 291—1941
- How to make thermocouples. **1**: 91(A)—1933
- Impedance bridge, a.c. operated, Everett Thompson. **8**: 265(A)—1940
- Improved apparatus for demonstrating an oscillatory discharge, Edwin S. Fox. **19**: 486(A)—1951
- Induction kilowatt-hour meter, Grant O. Gale. **18**: 388—1950
- Inexpensive high resistance voltmeter, Orrin H. Smith. **19**: 244—1951
- Ionization chamber, calibration of, Duis D. Bolinger. **19**: 397(T)—1951
- Lauritsen quartz fiber electroscope, student experiments with, G. Karioris. **19**: 398(T)—1951
- Light-weight transformers for aircraft, D. W. Grant. **1**: 59(A)—1933
- Mapping electrical fields, simple apparatus for, C. J. Overbeck. **16**: 123(A)—1948
- Measuring temperature coefficients of resistance, adjustable constant temperature oven for, F. C. Walz, R. V. Cartwright, and W. B. Pietenpol. **5**: 221(A)—1937
- Mechanical switching arrangement for oscillograph demonstrations of certain electric transients, L. E. Smith, Jr. **9**: 50—1941
- Modified Cotton balance, Zaboj V. Harvalik. **19**: 128—1951
- Motor-driven vibrator units for the measurement of capacitance, D. S. Ainslie. **19**: 486(A)—1951; **20**: 52—1952
- Motors from magnets, Myron A. Jeppesen and Clement R. Field. **12**: 173—1944
- Photoelectric cells, photometric teaching methods using, U. Andrewes and T. J. Dillon. **19**: 514—1951
- Photoelectric liquid-level controller, C. Ireland. **15**: 92(T)—1947
- Projection electroscope, Wilfrid J. Jackson. **3**: 193—1935
- Resistivity apparatus for rod specimens, A. A. Hammond and C. Williamson. **14**: 70(T)—1946
- Rotatable stand and switch for Crookes tubes, W. F. Powers and G. W. Alderman. **4**: 32—1936
- Scanning device for plotting equipotential lines, John Simpson. **8**: 326(A)—1940
- Sensitivity control for the Lindemann electrometer, L. G. Grimmett. **1**: 27(A)—1933
- Simple cell for the study of conductance, H. B. Gordon. **1**: 124(A)—1933
- Simple high impedance a.c. voltmeter, P. H. Miller, Jr., and L. I. Schiff. **12**: 173—1944
- Simplified direct-reading potentiometer, A. H. Weber. **9**: 314—1941
- Some remarks on the galvanometer, M. S. Cohen. **16**: 324(T), 365(T)—1948
- Special commutator for the comparison of capacitances, D. S. Ainslie. **6**: 325—1938
- Stepped-surface piezoelectric filters, R. R. McDonough, D. W. MacLeod, and G. A. Larson. **20**: 395(T)—1952
- Stroboscope for the demonstration of phase differences in alternating current circuits, E. Hobart Collins. **11**: 38—1943
- Stroude and Oates induction bridge, W. H. Hyslop. **19**: 483(T)—1951
- Ten channel time sequential analyzer, F. C. Whitmore, P. R. Liller, and H. Fenny. **19**: 442(A)—1951
- Tesla coil, James B. Kelley and Lee Dunbar, Sr. **20**: 32—1952
- Three-phase motor and generator attachment, Gregg M. Evans. **3**: 76—1935
- Use of polystyrene to improve electrostatic equipment, A. R. Reed. **17**: 391(A)—1949
- Van de Graaff generator for demonstration purposes, Richard H. Waters. **19**: 195(T)—1951
- Variable carbon resistance, A. G. Fruehan and C. L. Mehl. **2**: 123(A)—1934
- Variable low resistance, W. H. Walton. **6**: 224(A)—1938
- Weston standard cell, D. S. Dedrick. **11**: 171(T)—1943

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- Amplifiers for cathode-ray oscilloscopes, Howard Voluum. **18**: 525(T)—1950
- Application of a thyratron to induction coils, L. C. Verman. **3**: 141(A)—1935
- Circuit details for a small supersonic oscillator of the piezoelectric type, Walter C. Bosch and Walter G. Allée, Jr. **6**: 272—1938
- Combining of simple electronic instruments into a Z meter and its use in studying characteristics of radio equipment, O. L. Railsback. **17**: 93(T), 232(A)—1949
- Compact thyratron demonstration apparatus, T. A. Benham. **12**: 166—1944
- Compensating audio pre-amplifier, A. W. Nye and P. L. Bateman. **8**: 325(A)—1940
- Constructing a simple magnetic lens electron microscope, Charles W. Hoffman. **8**: 70(A)—1940
- Construction of an electron multiplier tube, J. J. Brady. **8**: 139(T)—1940

- Course in electronics, laboratory equipment for, K. S. Kion. 15: 161—1947
- Designation of a thyratron tube, Carl C. Sartain. 19: 389(L)—1951
- Dissecting the cathode-ray oscilloscope, Rose A. Carney and John J. Spokas. 20: 326(A)—1952
- Double-bulb neon oscillograph, James F. Koehler. 4: 202—1936
- Double oscilloscope, William Hurst. 5: 213—1937
- Double wave device for use with a cathode-ray oscillograph, I. B. Davidson. 3: 46(A)—1935
- Electronic diffraction analyzer, K. R. Symon. 19: 400(T)—1951
- Electronic magnifier for observation of infra-red and ultraviolet, Zaboj V. Harvalik. 18: 151—1950
- Electronic spark timing device, A. Bardócz and A. Kemény. 20: 244—1952
- Electronic switch in experiments, O. L. Railsback. 15: 92(T)—1947
- Electronic voltage regulator for a small direct-current generator, G. G. Kretschmar. 8: 327(A)—1940; 9: 126—1941
- Electronics teaching aid, R. W. Leonard. 14: 276(T)—1946
- Elementary laboratory apparatus for instruction in the principles of radio, Sanford C. Gladden. 6: 167(A)—1938
- Improved electron projection microscope, Frank Grundhauser. 19: 251(T)—1951
- Inexpensive thermionic voltmeter, T. B. Rymer. 10: 61(A)—1942
- Medium-voltage regulated d.c. power supply, Austin R. Frey. 9: 242—1941
- Multiple frequency standard employing a modulated television-type raster for comparison of frequencies, Thomas J. Yeadon and Lloyd W. Morris. 19: 444(A)—1951
- New short-wave electronic tubes, J. J. Livingood. 15: 433(T)—1947
- Oscillatory discharge, improved apparatus for demonstrating, Edwin S. Fox. 19: 486(T)—1951
- Radio units for the laboratory, Paul A. Northrop. 7: 42—1939
- Simple high frequency demonstration oscillator, Richard H. Howe. 20: 465(A)—1952
- Simple 1000-c/sec oscillator, A. P. Marion. 16: 60(A)—1948
- Square-wave generator for instructional use, E. H. Green and W. H. Mais. 15: 171—1947
- Suggested equipment for teaching elementary electronics, R. Stollberg. 15: 360(T)—1947
- Triode model for use in the electrolytic tank, C. Williamson and E. M. Pugh. 9: 244(T)—1941
- Two-tube direct current amplifier, D. Brumbaugh. 9: 244(T)—1941
- Type of equipment useful in teaching electronics, Robert Stollberg. 15: 193—1947
- Vacuum tube electrometer for student use, Robert O. Bock. 18: 523(T)—1950
- Vacuum-tube voltmeter with an electric eye, Dale C. Baker. 8: 265(A)—1940
- Various applications of the multiplier photocell, L. D. Fallon. 18: 318(T)—1950

General

- Adjustable curve, H. H. Macey. 8: 78(A)—1940
- Adjustable support and stand for Bunsen burner, I. A. Balinkin. 4: 219(A)—1936
- Affectometer (lie detector), J. C. Kyle. 11: 171(T)—1943
- Appliance for exhibiting Brownian movement, Louis E. James and W. James Lyons. 2: 25—1934
- Blackboard harmonograph, John J. Heilemann. 3: 44(T)—1935
- Blast lamp from Bunsen burner, Ross A. Baker. 2: 38(A)—1934
- Calcite crystal model, F. E. Christensen. 18: 161—1950
- Capillary mercurial barometer, C. V. Boys. 11: 172(A)—1943
- Concrete bases for retort stands, O. H. F. Pieris. 6: 224(A)—1938
- Convenient viscosity apparatus, G. P. Brewington. 16: 319—1948
- Crystal models made on a milling machine, Allan Chace and H. Kersten. 6: 215—1938
- Demonstration apparatus for Lissajous figures, Paul F. Gaehr. 9: 94—1941
- Demonstration barometer, H. W. LeSourd. 14: 213(A)—1946
- Demonstration mass spectrometer, F. E. Christensen. 19: 59—1951
- Demonstration of Steiner's theorem, model for, James T. Curtis. 15: 93—1947
- Demonstration water hammer made of metal, Harold K. Schilling and Henry L. Yeagley. 12: 230, 239(T)—1944
- Density plummets, C. E. Lloyd. 13: 59(A)—1945
- Device for measuring the contour of the surface of a rotating liquid, Will C. Baker. 2: 26—1934
- Dynamic atom model, John B. Underwood. 16: 410—1948
- Easily constructed tangent meter, Robert M. Hoffman. 3: 46(A)—1935
- Filling large closed-end manometers, apparatus for, Angus E. Cameron. 2: 38(A)—1934
- Flexible crystal models, Isay A. Balinkin. 4: 50(T)—1936
- Genesis of flight instruments, M. F. Bates. 1: 61(A)—1933
- Glycerol vapor vacuum pump, Paul Alexander. 17: 47(A)—1949
- Improved Young's modulus apparatus, George H. Olewin. 8: 396—1940
- Industrial instruments, Philip Ewald. 11: 170(A)—1943
- Inexpensive Millikan oil-drop apparatus, C. C. Kiplinger. 4: 88—1936
- Instructional apparatus for studying pipe flow, R. C. Binder. 12: 41—1944

- Introduction to the elementary theory of linear servomechanisms, L. Jackson Laslett. **16**: 260—1948
- Kukulograph, M. J. Hoferer. **1**: 56(A)—1933
- Making a small compressor, Orlin D. Trapp. **2**: 39(A)—1934
- Mass-spectrograph and its uses, Walker Bleakney. **4**: 12, 31—1936
- Mechanical model for the demonstration of the Franck-Condon principle, Peter Pringsheim. **14**: 112—1946
- Metal crystal goniometer, Joseph W. Hickman and Joseph Getkso. **18**: 233—1950
- Model of the structure of Rochelle salt, Frances Pleasonton. **12**: 19—1944
- Model seismographs, R. W. Stott. **11**: 236(A)—1943
- Model to demonstrate elastic and plastic properties, G. Goldfinger and C. B. Wendell, Jr. **13**: 58(A)—1945
- New type of viscosimeter, A. A. Elkarim. **16**: 489—1948
- Osmosis, apparatus for demonstrating, H. D. Smith. **19**: 400(T)—1951
- Performance of a high precision spherometer, Wayne Steimle and L. E. Dodd. **9**: 245(A)—1941
- Projection manometer, J. W. Moore and C. M. Furgason. **11**: 115(A)—1943
- Radium-water generators, Herman Schlundt. **1**: 59(A)—1933
- Safety device for a differential oil manometer, W. Barkas. **7**: 350(A)—1939
- Seismograph, electromagnetic type, S. J. Allen. **16**: 324(T), 365(T)—1948
- Servomechanisms, Ralph Hoyt Bacon. **16**: 79—1948
- Simple apparatus for surface tension measurements, W. E. Haskell. **5**: 96(A)—1937
- Simple cathetometer and appliances, C. J. Overbeck. **3**: 34—1935
- Simple centroider, P. L. Taulbee. **13**: 57(A)—1945
- Some servo-mechanism principles, T. A. Benham. **18**: 334(A)—1950
- Stroboscopic aids in the teaching of physics, Newell S. Gingrich. **5**: 277—1937
- Supersonic wind tunnels, G. L. Shue. **16**: 324(T)—1948
- Surface tension apparatus, photometer, and torque board design, C. J. Overbeck. **4**: 35—1936
- Two-fluid barometer; linear expansion apparatus with special pump for circulating water; two types of apparatus for measuring thermal conductivity, C. Williamson. **13**: 265(T)—1945
- Two simple pieces of apparatus for the general physics course: a refractometer and practice switchboard, J. Bradford. **18**: 430(T)—1950
- Two useful laboratory devices: a falling-body release and a specific-resistance frame, C. R. Smith. **15**: 92(T)—1947
- Tyndall cone apparatus, H. J. Abrahams and H. J. Dubner. **11**: 77(A)—1943
- Apparatus for demonstrations, T. M. Hahn. **5**: 285(T)—1937
- Apparatus wanted and for sale, O. Blackwood. **19**: 384(L)—1951
- Building physics equipment, J. R. Watson. **8**: 139(T)—1940
- Choice and design of educational apparatus for the general physics laboratory, W. L. Kennon. **4**: 50(A)—1936
- Classroom and laboratory wind tunnels, design and performance of, J. C. Herman, B. V. Rhodes, and M. S. McCay. **19**: 443(A)—1951
- Concerning articles on apparatus for demonstration and experiment, C. W. Ufford. **7**: 260—1939
- Direct applications of physics laboratory equipment on aircraft, Sherwood Githens, Jr. **10**: 212(A)—1942
- Historic demonstrations, O. Oldenberg. **20**: 111—1952
- Historical apparatus at the University of Mississippi, W. L. Kennon and Sanford C. Gladden. **6**: 1—1938
- Improvements in laboratory apparatus, E. H. Collins. **11**: 171(T)—1943
- Improvements in two standard pieces of apparatus, John L. Gipprich and Alfred H. Weber. **4**: 133—1936
- Inexpensive laboratory manual rack, A. C. Adams. **1**: 123(A)—1933
- Laboratory apparatus for high schools, W. L. Woodson. **7**: 201(T)—1939
- Large-sized apparatus in lecture demonstrations in physics, W. H. Kadesch. **19**: 483(T)—1951
- Method of handling elementary laboratory apparatus, Sanford C. Gladden. **5**: 283—1937
- Modern instrumentation needed at the undergraduate level, M. E. Hufford. **19**: 399(T)—1951
- New developments in apparatus for the elementary laboratory, O. H. Blackwood and E. Hutchisson. **1**: 41—1933
- Nonpriority equipment, R. C. Hitchcock. **10**: 211(T)—1942
- On the choice, design and construction of apparatus for large laboratory classes, W. L. Kennon. **16**: 362(T)—1948
- Poggendorff's apparatus, W. Weniger. **14**: 70(T)—1946
- Simple apparatus in teaching and research. **13**: 58(A)—1945
- Some apparatus for elementary laboratories, Thomas H. Osgood. **4**: 51(T)—1936
- Some new and improved physics apparatus, J. G. Black. **3**: 44(T)—1935
- Some physics laboratory devices, Newton Gaines. **4**: 51(A)—1936
- Some simple, large scale models of apparatus developed for first-year college physics, J. Barton Hoag. **12**: 18(T)—1944
- Some useful demonstration apparatus, N. H. Black. **7**: 426(A)—1939
- Some uses of surplus equipment, A. D. Hummell. **19**: 196(T)—1951
- Student contributions to the physics laboratory, F. Buckley. **11**: 155; Erratum. **11**: 271—1943

Laboratory and Demonstration

Adequate physics apparatus for every school, Shailer Peterson. **11**: 358(A)—1943

- Student projects in the physics shop, G. P. Brewington. 7: 71(A)—1939
 Surplus war equipment in the local area, W. Geer and D. L. Soltau. 14: 70(T)—1946
 Three pieces of equipment for the museum or demonstration laboratory, J. G. Black. 8: 71(A)—1940
 Three pieces of lecture room apparatus, demonstration of, Richard M. Sutton. 5: 45(A)—1937
 Wind tunnel for student experiments and for demonstrations, I. F. Zartman and Warren Eberly. 9: 84—1941

Light Sources

- Cold cathode mercury arc, Paul L. Copeland. 18: 462(T)—1950
 Construction of a standard lamp, R. Hanau. 17: 164(T)—1949
 Convenient mercury-vapor lamp, R. R. Ramsey. 5: 87—1937
 Exciting the spectrum of atomic hydrogen, apparatus for, Myron A. Jeppesen. 5: 225—1937
 Flame source for spectroscopy, K. D. Larsen and W. Keck. 20: 309—1952
 High intensity mercury vapor lamp, use of, Winthrop R. Wright. 5: 229—1937
 Inexpensive strong U-V source, Fred W. Decker. 19: 251(A)—1951
 Mercury light source, Wallace A. Hilton. 19: 248(L)—1951; O. K. Hudson. 20: 114(L)—1952
 Mercury light source for use with a diffraction grating, Milton L. Braun. 20: 311(L)—1952
 Mercury spectrum source, M. W. Schwinn. 15: 279; Paul Kirkpatrick. 15: 359—1947
 Mercury spectrum source for the basic laboratory, M. S. McCay and E. S. Bishop. 16: 361(A)—1948
 New point-source lamp for the laboratory, Harry L. Smith. 14: 313—1946
 Simply constructed source of ultraviolet continuum, Stanley S. Ballard and Martin E. Nelson. 8: 167—1940
 Source for the Balmer series of hydrogen and deuterium, G. P. Harnwell. 3: 185—1935

Magnetic

- Control unit for experiments on hysteresis loops and magnetization curves, Willard H. Eller. 8: 234—1940
 Demonstration unit for magnetostriction, Jun Hino and George Sandoz. 18: 515—1950
 Design and construction of an air-cooled electromagnet, Arthur Luck. 18: 392(T)—1950
 Dynamic hysteresis loop tracer, T. A. Benham. 19: 136(T)—1951
 Experiments with an electromagnetic pendulum, J. E. Calthrop. 3: 32—1935
 Laboratory type of traction electromagnet, Sanford C. Gladden. 4: 134—1936
 Magnetic force-finder, Ludvig C. Larson. 1: 116—1933
 Magnetic heat-motor, John Mills. 5: 40—1937
 Measuring attraction between magnetic poles, apparatus for, G. E. Davis. 8: 264(T)—1940

- Measuring the force exerted on a magnet by a linear direct current, apparatus for, Alva Turner. 17: 76—1949
 Model of ferromagnetic action, R. M. Bozorth and J. F. Dillinger. 5: 157—1937
 Models to illustrate gyromagnetic and electron-inertia effects, S. J. Barnett. 5: 1—1937
 New type of search coil for ballistic measurement of magnetic field strength, John Simpson. 8: 327(A)—1940
 Null-deflection magnetometer with electromagnetic control, A. R. Ingles. 16: 391—1948
 Pendulum, magnetically maintained, Harold P. Knauss and Paul R. Zinsel. 19: 318—1951
 Simple balance for measuring electromagnetic attractions and repulsions, R. M. Archer. 3: 198(A)—1935
 Small electromagnet, S. R. Williams, W. W. Stiffler, and T. Soller. 1: 26(A)—1933
 Useful search coils and systems for uniform magnetic fields, Milan W. Garrett. 19: 136(T)—1951

Mechanical

- Airplane model to show forces, Blaine E. Sites. 12: 171—1944
 Approximate supersonic wind-tunnel simulator, Allen H. Schooley. 15: 164—1947
 Atwood's machine and the teaching of Newton's second law, Irving L. Kofsky. 19: 354—1951
 Atwood's machine from Behr apparatus, P. W. Williams. 18: 237(L)—1950
 Bicycle ergometer, Lester I. Bockstahler. 17: 232(A)—1949
 Centrifugal force and rotational inertia, apparatus for study and use in general physics laboratory, W. L. Kennon. 19: 443(A)—1951
 Centripetal force apparatus, E. H. Collins. 14: 70(T)—1946
 Closed differential pulley, Laurence E. Dodd. 19: 399(A)—1951
 Convenient vibration source of variable frequency for Melde's experiment, Peter I. Wold and Frank J. Studer. 8: 165—1940
 Demonstration gyroscope, V. E. Eaton. 18: 334(A)—1950
 Demonstration of Lissajous' figures, G. E. F. Fertel and R. W. B. Stephens. 5: 223—1937
 Demonstration with a pressure-gauge tester, B. L. Brinker and A. P. Brinker. 14: 341(T)—1946
 Determining the mass of a body without the aid of gravity, apparatus for, Henry A. Erikson. 6: 33—1938
 Device for demonstrating constancy of angular momentum, Mason E. Hufford. 13: 417—1945
 Device to assist in height measurements, S. L. Anderson. 11: 172(A)—1943
 Device to show constancy of angular momentum in rotation, M. E. Hufford. 13: 56(T)—1945
 Experiment illustrating centripetal force, Park Hays Miller, Jr. 12: 40—1944
 Falling body apparatus, Alton Wangsgard. 6: 205—1938

- Force in an elevator cable, T. H. Stevens. **7**: 136—1939
- Forced vibration demonstration apparatus with stroboscopic attachment, J. Lloyd Bohn and Francis H. Nadig. **9**: 57(A)—1941
- Free-fall apparatus which uses photographic recording, Glenn F. Rouse. **4**: 209—1936
- Freely rotating suspension made from magnet and ball bearings, W. H. Dowland. **9**: 197(A)—1941
- Gravimeter, D. H. Clewell. **10**: 57(T)—1942
- High speed rotors, J. W. Beams. **17**: 391(T)—1949
- Impact ball apparatus, some interesting aspects of, Seville Chapman. **9**: 357—1941
- Improved centripetal force device, Oswald Blackwood. **20**: 400(A)—1952
- Inertia balance for the lecture room, William Schriever. **5**: 48(T)—1937
- Isochronous pendulums: a correction, W. W. Sleator. **16**: 323—1948
- Jet-propulsion apparatus, W. L. McRary and E. L. Bickerdike. **13**: 420—1945
- Laboratory apparatus for the determination of the acceleration of a freely falling body, R. M. Bowie. **1**: 26(A)—1933
- Laboratory experiment leading to the postulation of Newton's laws of motion, apparatus for, Nicholas M. Smith, Jr. **8**: 71(A)—1940
- Larger gyroscope, George P. Unseld. **14**: 274—1946
- Mackay's model of the climbing monkey, W. W. Sleator. **16**: 320—1948
- Measuring the acceleration due to gravity, apparatus for, Julius H. Taylor. **19**: 245—1951
- Measuring torque, apparatus for, W. N. St. Peter. **13**: 265(T)—1945
- Mechanical model for the climbing monkey problem, R. Stuart Mackay. **16**: 248—1948
- Mechanical oscillator for determining moments of inertia, W. C. Elmore. **8**: 394—1940
- Mechanical oscillator for Melde's experiment, P. I. Wold and Frank J. Studer. **8**: 70(A)—1940
- Mechanical stroboscope, Paul D. Bales and Edgar Blackburn. **5**: 39—1937
- Melde experiment, Wallace A. Hilton. **20**: 310(L)—1952
- Modification of the vibration source for Melde's experiment, George D. Rock and Albert May. **9**: 189—1941
- Modified Atwood machine for use by elementary students, K. H. Fried and W. H. Mais. **12**: 210—1944
- Modified ballistic pendulum, W. H. Michener. **9**: 58(A)—1941
- Moment of inertia equipment, C. H. Robertson. **15**: 360(T)—1947
- New impact apparatus, Harold K. Schilling and Henry Yeagley. **15**: 60—1947
- New inertia balance and operational definition of mass, William Schriever. **5**: 202—1937
- New laws of motion apparatus, Harold K. Schilling and David Eickhoff. **2**: 124(A)—1934
- New type "collisions" apparatus, H. K. Schilling. **11**: 47(A)—1943
- Pendulums with clamped or loose hangers, John Satterly. **14**: 316—1946
- Projection apparatus for compounding harmonic vibrations, R. M. Archer. **6**: 109(A)—1938
- Projection centrifuge, Henry A. Erikson. **6**: 39—1938
- Proof of the centrifugal force formula, mv^2/r , apparatus for, W. H. Dowland and N. Herbert. **9**: 197(A)—1941
- Rocket-propelled airplane, demonstration of, Vernon L. Bollman. **19**: 195(A)—1951
- Rotating cylinder viscometer, simple arrangement for, F. H. Hibberd. **20**: 134—1952
- Simple laboratory apparatus for experiments in dynamics, Walter Soller. **3**: 133—1935
- Simple torque apparatus, R. G. Wilson. **9**: 123—1941
- Stability of centripetal force apparatus, Mildred Allen. **15**: 470—1947
- Study of a new arresting device for Fletcher's acceleration apparatus, W. G. Wadey. **20**: 122—1952
- Transverse-wave apparatus, F. E. Christensen. **16**: 122(A), 248—1948
- Vee pulleys, G. R. Myers. **1**: 90(A)—1933

Nuclear

- AEC looks at the problem of supplying nuclear reactors for engineering colleges, T. Keith Glennan. **20**: 526(T)—1952
- BF₃ counter, demonstration of, Dale Marvin Holm. **19**: 397(A)—1951
- Classroom demonstration of alpha-particle scintillations, Arthur Waltner. **16**: 44—1948
- Conductivity crystal counters, A. G. Chynoweth. **20**: 218—1952
- Construction and study of the characteristics of Geiger-Mueller counters, G. S. Hurst. **17**: 164(T)—1949
- Easily constructed alpha-particle range apparatus, Vernon L. Bollman. **20**: 374—1952
- Easily constructed apparatus for the measurement of the range of alpha particles in air, V. L. Bollman. **16**: 57(T)—1948
- Fast coincidence analyzer, Charles C. Rayburn and T. M. Hahn, Jr. **19**: 400(T)—1951
- Geiger counter for weak radiations, Robert B. Bennett. **18**: 391(A)—1950
- Geiger counters, J. L. Duranz or Edward Reible. **18**: 430(T)—1950
- Geiger-Müller counters and associated circuits, experiments with, A. L. Hughes. **7**: 271—1939
- Horizontal projection cloud chamber, J. R. Dunning and Edith Haggstrom. **5**: 274—1937
- Hydrodynamic model for demonstrations in radioactivity, J. Lloyd Bohn and Francis H. Nadig. **6**: 320—1938
- Liquid scintillation counters, C. E. Falk and H. L. Poss. **20**: 429—1952
- Magnetic lens beta-ray spectrograph of new design, E. G. Ebbighausen. **16**: 325(T)—1948
- Modified Wilson cloud chamber, George C. Patterson. **19**: 251(T)—1951

- New developments in instruments for courting and detecting nuclear particles, Walter Jordan. **15**: 361(T)—1947
- Particle counters, Robert Walker. **19**: 399(T)—1951
- Photomultiplier tubes as scintillation counters, T. Scolman and R. R. Palmer. **18**: 430(T)—1950
- Physical model to demonstrate nuclear and paramagnetic resonance, E. F. Carr and C. Kikuchi. **19**: 486(A)—1951; **20**: 110—1952
- Projection cloud chamber, M. Stanley Livingston. **4**: 33—1936
- Projection electroscope for α - and β -rays, B. A. Spicer. **7**: 77(A)—1939
- Proportional counter, investigation of gas amplification in, J. E. Hopson. **19**: 250(A)—1951
- Radioactivity measurements in the undergraduate laboratory, apparatus for, Ralph A. Loring. **20**: 325(T)—1952
- Scintillation counters, Philip A. Goldberg. **16**: 413(A)—1948
- Simplified cloud chamber for the physics laboratory, Elmer Nussbaum. **20**: 466(A)—1952
- Solenoidal beta-ray spectrometer for the undergraduate laboratory, Byron T. Wright. **20**: 194(A), 230—1952
- Solid boron neutron detector, design and construction of, Dale M. Holm. **19**: 483(T)—1951
- Student type portable Geiger-Müller counter, Walter C. Bosch. **5**: 273—1937
- Student's neutron spectrometer, W. C. Koehler and C. C. Harris. **20**: 393(A)—1952
- Thin-windowed Geiger-Müller counters, design and characteristics of, R. L. Purbrick, Lawrence T. Cherry, and James F. Carpenter. **19**: 397(T)—1951
- Wilson cloud chamber, R. W. Willmott. **16**: 324(T), 365(T)—1948; F. E. Christensen. **18**: 149—1950
- Optical*
- Automatic polariscope, J. B. Nathanson. **5**: 269—1937
- Balanced-beam, drift-eliminated recording microphotometer, A. H. Budlong. **19**: 398(T)—1951
- C. V. Boys' rainbow cup, H. M. Sullivan. **20**: 184(L)—1952
- C. V. Boys' rainbow cup and experiment with thin films, John Satterly. **19**: 448—1951
- Coarse diffraction gratings for lecture demonstration and laboratory, H. M. Reese and N. S. Gingrich. **14**: 324—1946
- Color demonstration apparatus, J. A. Van den Akker. **16**: 1—1948
- Color mixers, John Zeleny. **4**: 100—1936
- Construction of a recording comparator microphotometer, R. J. Reithel, B. D. Kern, and Richard Hanau. **20**: 388(A)—1952
- Continuously variable diaphragm for use in spherical aberration studies, W. P. Gilbert. **4**: 212—1936
- Convenient apparatus for the diffraction grating experiment, G. P. Brewington. **17**: 580—1949
- Convenient virtual image locator for elementary optics, Paul K. Taylor. **13**: 167—1945
- Demonstrations in geometrical optics, apparatus for, K. H. Fried, E. H. Green, and W. H. Mais. **8**: 43—1940
- Device for teaching thin lenses, R. C. Hitchcock. **12**: 241(T)—1944
- Diffraction of light by supersonic waves in liquids; apparatus for demonstration and for an intermediate laboratory experiment, Alva W. Smith and Lewis M. Ewing. **8**: 57—1940
- Displacement polarimeter, Newton Underwood. **7**: 57—1939
- Dynamic ray tracer for thin lenses and spherical mirrors, Henry A. Knoll. **20**: 390(A)—1952
- Easily constructed Fresnel mirrors, H. M. Reese. **4**: 215—1936
- Elliptic mirror for lecture demonstration, J. Smithson and W. T. Fenhagen. **19**: 442(T)—1951
- Improved apparatus for the study of the concave mirror, J. G. Moorhead. **1**: 113—1933
- Indicating lantern slide color mixer, John J. Heilemann. **4**: 50(T), 211—1936
- Individual apparatus for elementary optics, Eric M. Rogers. **9**: 55(A)—1941
- Inexpensive student interferometer, Francis H. Nadig and J. Lloyd Bohn. **11**: 234(T), 297—1943
- Laboratory modification of the Pulfrich refractometer, V. N. Thatte. **1**: 90(A)—1933
- Large working model of the eye, W. N. St. Peter. **13**: 265(T)—1945
- Lecture-room optical disk, H. E. Carr, W. T. Fenhagen, and J. R. Smithson. **18**: 393(T)—1950
- Lucite accessories for the Stevens optical disk, C. C. Sartain. **9**: 194(A)—1941
- Luminous bridge, W. B. Pietenpol. **10**: 56(A)—1942
- Luminous potentiometer, W. B. Pietenpol. **9**: 55(A)—1941
- Measurement of the index of refraction of air, simple apparatus for, Paul S. Delaup. **14**: 383—1946
- Mechanical device for exhibiting the properties of a thin lens, Ira M. Freeman. **10**: 150—1942
- Mechanical model for demonstrating Fermat's principle, W. Cullen Moore. **18**: 333(A)—1950; **19**: 1—1951
- Model showing variable astigmatism—a modification of Gardner's model, Eric Rogers. **9**: 49(A)—1941
- Model to demonstrate spherical aberration of a concave spherical mirror, F. R. Hirsh, Jr. **13**: 267—1945
- Model to demonstrate the refraction of light at a boundary between two media of different indices of refraction, F. R. Hirsh, Jr. **16**: 57(T)—1948
- Model to show the perfect focusing of a parabolic mirror, F. R. Hirsh, Jr. **14**: 446—1946
- New design for a nodal slide, Leonard Eisner. **20**: 519—1952
- New design of optical bench for lecture and laboratory. F. H. Crawford. **18**: 228(A)—1950
- Nodal slide of flexible design for a course in intermediate optics, Leonard Eisner. **18**: 333(A)—1950
- Optical levers, B. H. C. Mathews. **8**: 270(A)—1940
- Phonoptic equipment for individual student use, Harold K. Schilling. **7**: 70(A)—1939

Polarization photometer for measurement of low intensity light, R. E. Nyswander. **5**: 220(A)—1937
 Rangefinder using the eyes as objectives, Harley J. Haden. **18**: 165(T)—1950; Harley J. Haden and William H. Morgan. **17**: 73—1949
 Recent developments in the detection of infra-red radiation, R. T. Eliickson. **15**: 199—1947
 Schmidt-type telescope, Carl K. Seyfret. **15**: 362(A)—1947
 Short radius optical lever for use with Young's modulus apparatus, Willard H. Eller. **19**: 379—1951
 Simple color patch apparatus, Robert Weale, **17**: 89—1949
 Simple substitute for a micrometer eyepiece, H. E. Watson. **2**: 38(A)—1934
 Student interferometer, Andrew Longacre. **8**: 38—1940
 Telescope and microscope, basic principle for, H. C. Schepler and A. N. Smith. **19**: 129—1951
 Telescope of very wide field of view and small diameter-to-length ratio, James A. Duncan. **8**: 69(A)—1940
 Tricolor mixing device using small-angle prisms, Calvin C. Warfield. **6**: 167(T)—1938
 Water prisms and a ray-tracing device for demonstrations in optics, Ting Supao. **16**: 52—1948
 Wave-motion slide rule, J. D. Richards. **20**: 305, 325(A)—1952

Photographic

Bellows for homemade enlarging cameras. **1**: 124(A)—1933
 Easily constructed camera for use in making lantern slides, Forrest F. Cleveland. **5**: 226—1937
 Focusing aid for photographic enlarging and other applications of focusing without a ground glass, Albert V. Baez. **20**: 592(L)—1952
 Lens for a miniature camera. I. Clyde Cornog. **13**: 41—1945
 Negative drier. **1**: 124(A)—1933
 Phototube-controlled slave flashgun, H. F. Osterman, R. W. Ashbee, and C. Williamson. **18**: 525(A)—1950
 Projector for stereoscopic pictures, D. Jerome Fisher. **10**: 46—1942
 Rapid photo-printer for small shops, H. C. Karloske. **1**: 57(A)—1933
 Semi-automatic film-slide projector, John A. Eldridge. **6**: 45(A)—1938
 Simple device for rapid production of photographic copies, Forrest F. Cleveland. **8**: 261—1940

Spectroscopic

Absorption cells for vacuum spectroscopy, Robert H. Noble. **17**: 93(A)—1949
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 Apparatus for spectroscopic analysis, E. E. Chandler. **7**: 77(A)—1939
 Construction of a diffraction grating spectrograph, R. L. Purbrick. **20**: 394(A)—1952
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Inexpensive three-meter diffraction grating spectrograph, George Bjorke. **18**: 525(A)—1950
 Laboratory-built spectrographs, lenses for, Ralph A. Loring. **19**: 487(A)—1951
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 Simple device for focusing a spectrometer telescope for parallel light, Alfred H. Weber. **3**: 130—1935
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 Steinheil spectroscope of 65 years ago, Howard Long. **18**: 318(T)—1950
 Student spectrograph from surplus equipment, Ralph A. Loring. **19**: 329(A)—1951
 Student spectrometer from surplus materials, R. A. Loring and R. L. Remely. **17**: 460(T)—1949; Ralph A. Loring. **18**: 519(A)—1950
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Adiabatic calorimeter, J. S. Arthur. **16**: 58(T)—1948
 Angstrom pyrheliometer in the laboratory, G. A. Shook. **1**: 91(A)—1933
 Automatic pressure-regulating unit for vacuum distillation, E. H. Huntress and E. B. Hershberg. **1**: 90(A)—1933
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 Fitch's apparatus for the measurement of thermal conductivity, John Satterly. **19**: 132(L); Frank P. Fritchle. **19**: 475(L)—1951
 Gas law demonstration apparatus, F. C. Hickey. **13**: 5(A)—1945
 Improved apparatus for the determination of Joule's equivalent by the electrical method, J. H. McLeod. **3**: 183—1935
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 Inexpensive micro-burner, V. T. Jackson. **3**: 197(A)—1935
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Kinetic molecular theory of gases, apparatus to demonstrate, L. de St. Paër. **8**: 330(A)—1940

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Modified cryophorus, Ross A. Baker. **7**: 424—1939

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Working model to demonstrate the effect of heat on a confined volume of gas, D. G. Nicholson. **6**: 289(A)—1938

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Another substitute for stop watches, W. H. Michener. **5**: 41—1937

Atomic clock, Harold Lyons. **17**: 391(T)—1949

Automatic control and timing device, Alfred H. Weber and Edward J. Grill. **9**: 381—1941

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Electronic impulse timer, C. W. Sheppard. **11**: 43—1943

Fast coincidence analyzer, Charles C. Rayburn and T. M. Hahn, Jr. **19**: 400(A)—1951

Inexpensive tachometer of high accuracy, F. C. Walz and R. V. Cartwright. **5**: 221(A)—1937

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Minute sounder, W. T. Whelan. **11**: 232(T)—1943

Pendulum timer for the elementary laboratory, W. W. McCormick. **7**: 260—1939

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Simple chronoscope for measuring time intervals to thousandth of a second, A. G. Worthing. **3**: 44(T)—1935

Simple electronic spark timer, G. Stanley Klaiber and Leason K. Kington. **18**: 397—1950

Simple electronic timer, R. R. Palmer. **17**: 335(T)—1949

Simple laboratory timer, Herschel Smith. **4**: 136—1936

Spark timer and an impulse counter used as an inertia balance, H. Petterson. **19**: 400(T)—1951

Stop clock with magnetic fluid clutch, V. Eaton. **19**: 330(A)—1951

Switch for stopclocks, Lewis S. Combes. **8**: 66—1940

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Actinoscope, a device to demonstrate the presence of x-rays, Edwin P. Heinrich. **20**: 400(A)—1952

Conversion of an optical spectrometer for x-ray problems, Robert H. MacFarland. **20**: 516—1952

Moseley law x-ray tube for atomic physics laboratories, Boris Sway and D. A. Wells. **6**: 208—1938

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- Proposed experimental physics course for seniors, R. S. Caswell. 20: 388(A)—1952
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- Curriculum in physics at the University of Chicago, Harold R. Voorhees. 18: 393(T)—1950
- Curriculum problems of physics departments, Jesse C. Hendricks. 16: 324(T)—1948
- Curriculum trends in the physical sciences at the University of Chicago, James B. Parsons. 18: 393(T)—1950
- Differentiated physics courses at the University of Pittsburgh, Oswald Blackwood. 18: 526(A)—1950
- Engineering physics at Cornell, Lloyd P. Smith. 19: 174—1951
- Extension training and ESMWT physics and radio courses, H. R. Vinyard. 11: 170(T)—1943
- Growth and changes in the engineering physics curriculum at the University of Illinois, P. G. Kruger. 11: 232(T)—1943
- Intensive study schedules, Gilbert Myers. 18: 394(T)—1950
- Intra- and extra-curricular war courses at Smith College, Nora M. Mohler. 11: 50(T)—1943

- Minimum curriculum for small departments, R. E. Martin. 19: 399(T)—1951
- Modernizing and improving the undergraduate physics curriculum. 19: 399(T)—1951
- Modernizing the undergraduate physics curriculum: proposed change at Washington University, A. L. Hughes. 15: 49—1947
- Nature and objectives of the physics program at Carroll College, V. P. Batha. 18: 430(T)—1950
- Observations on the objectives and the teaching of physics in England and Canada, John Satterly. 7: 1—1939
- Physics courses in the curricula of the technical institutes, Marsh W. White. 14: 341(T)—1946
- Physics curriculum at Brooklyn College, Frances O. Severinghaus. 20: 173—1952
- Physics in the commerce curriculum at the University of Cincinnati, C. H. Dwight. 2: 111—1934
- Physics in the Navy, Fred K. Elder, John A. Tiedeman, Lawrence E. Kinsler, John D. Riggin, E. R. Pinkston, and Ralph A. Goodwin. 12: 279—1944
- Physics museum of the University of Chicago and its relation to the new curriculum, Harvey B. Lemon. 2: 10—1934
- Preprofessional undergraduate curriculum in physics, Stanley S. Ballard. 18: 335(A)—1950
- Problem of introduction of the new material into the undergraduate program; (A) the organization of the new material in the courses; (B) the selection and development of equipment to be used in the courses, Jacob A. Rinker. 17: 94(A)—1949
- Proposed reorganization of undergraduate physics, A. E. Caswell and Walter Cordy. 13: 315—1945
- Recent curricular developments at the University of Chicago, T. A. Ashford, R. J. Stephenson, and M. J. Ference. 6: 167(T)—1938
- Revision of the junior and senior undergraduate curriculum at Washington University, A. L. Hughes. 14: 341(T)—1946
- Status of courses in physics and of physics departments in institutions of higher education—October, 1942, George H. Burnham. 11: 78—1943
- Status of curriculums in applied physics, Homer L. Dodge. 5: 46(T)—1937
- Introductory*
- Attempt toward more wisdom and less knowledge, Richard Schlegel. 17: 93(A)—1949
- Basic-concepts course in physics, A. G. Worthing. 15: 197(A), 318—1947
- Block-and-gap physics course, flashback teaching technique applied to, A. J. Hatch and D. F. Cope. 19: 137—1951
- Complete physics course through electric trains, Harry Peach. 20: 314(L)—1952
- Content of high school physics course, S. W. Cram. 12: 112(A)—1944
- Cultural course in college physics for nontechnical students, W. S. Webb. 13: 120(T), 307—1945
- Cultural courses in physics, William S. Webb. 7: 263(T)—1939
- Engineering physics in the freshman year, Henry Hartig. 15: 432(T)—1947
- First year of two-year science program at Amherst College, Theodore Soller. 18: 519(T)—1950
- Heresy concerning specialized physics courses, G. W. Stewart. 1: 55(T), 65—1933
- Household physics, courses in, Waldemar Noll. 8: 264(A)—1940
- Laboratory arts course in physics, Raymond Morgan. 16: 324(T)—1948
- Laboratory course with a plot, George B. Welch. 3: 69—1935
- Modification of the traditional approach to college physics, L. W. Taylor. 1: 68, 96—1933
- Non-numerical physics for nonscience students, Clarence E. Bennett. 10: 54(A)—1942
- Nonscience majors, course for, W. J. Jackson and E. A. Townsend. 17: 234(A)—1949
- Physics as a cultural course in women's colleges, Mary Helen Dodd. 7: 265(A)—1939
- Physics-chemistry sequence, J. B. Hoag. 14: 142(A)—1946
- Physics courses of selected engineering schools, Earl W. Thomson. 14: 341(T)—1946
- Physics for humanities majors, N. Goldowski. 17: 391(A)—1949
- Physics laboratory arts; an undergraduate course, Harry Hill. 18: 526(A)—1950
- Principles of physics in the courses taken by midshipmen, Walter E. Peterson. 12: 110(A)—1944
- Refresher courses for secondary school teachers, P. N. Powers and W. H. Stickler. 15: 436(A)—1947
- Refresher program for high school physics teachers, Elmer Hutchisson. 17: 234(A)—1949
- Remarks on teaching concentrated physics courses, F. T. Rogers, Jr. 11: 46(A)—1943
- Samples *versus* survey in physics courses for liberal arts students, Eric M. Rogers. 12: 113(A)—1944; 14: 384—1946
- Student projects in physics at Kalamazoo College, Howard S. Seifert. 8: 171—1940
- Subject matter for a course in general college physics, R. F. Paton. 11: 45—1943
- Suggestions for a new second-year course in physics, C. J. Lapp. 6: 42(T)—1938
- Summer refresher program for high school physics teachers, Elmer Hutchisson. 17: 567—1949
- Survey course in physics for seniors in engineering, Marsh W. White. 1: 21(T), 55(T)—1933
- Third-semester high school course in physics, G. M. Koehl. 11: 231(T)—1943
- Third-semester physics course, J. Gordon Stipe, Jr., and Isabel Boggs. 19: 443(A)—1951
- Two-year course in basic elementary physics, G. Forman, P. Rudnick, F. G. Slack, and N. Underwood. 17: 22—1949

- Two-year course in physics for engineering students, Francis G. Slack and Guy Forman. 16: 363(A)—1948
- Two-year program in general physics, Clarence E. Bennett and Karl D. Larsen. 6: 42(A), 201—1938
- Two-year science program in Columbia College, J. R. Dunning and H. W. Farwell. 5: 150—1937
- Two-year sequence for the general course in college physics, Thomas B. Brown. 7: 68(A)—1939
- Unified approach to physics, Noel C. Little. 18: 335(A)—1950; 19: 351—1951; Review by W. P. Gilbert. 18: 430(T)—1950
- Variability in the first courses in general college physics, Karl F. Oerlein. 5: 80—1937
- What is a cultural physics course? R. J. Havighurst. 1: 21(T), 33—1933

Photography

- Need for more college instruction in photography, Wallace E. Dobbs. 9: 176—1941
- Organizing a college credit course in photography, Miles J. Martin. 7: 116—1939
- Photography—a service course, Leda Cadle. 15: 361(A)—1947
- Photography as a college subject, J. C. Garman. 8: 326(A)—1940
- Photography in the physics curriculum, Paul E. Boucher. 5: 85—1937; Carl W. Miller. 9: 49(T), 107—1941
- Place of photography in the physics curriculum, Paul E. Boucher. 5: 45(T)—1937
- Plea for instruction in photography in high schools, Tyler Gaskill Price. 2: 187(A)—1934
- Suitability of photography as a university credit course in physics, J. E. Mack and M. J. Martin. 6: 42(A)—1938
- Summer courses in photography at Rochester. 5: 132—1937
- Teaching of photography, Wilson Woodcock. 7: 394—1939
- Teaching photography at the University of Texas, J. M. Kuehne. 16: 362(T)—1948

Physical Science

- Appraisal and criticism of survey courses, E. H. Dixon. 9: 194(A)—1941
- College physical science courses in general education, C. C. Clark. 17: 234(A); 267—1949
- Combined chemistry-physics course, E. C. Fuller. 16: 92(A)—1948
- Development of a course "Backgrounds of Science," Norris W. Goldsmith. 19: 330(A)—1951
- Difficulties in offering a physical science course, June Phillipot. 17: 335(T)—1949
- Experiment in cooperative education, Monica Healea. 14: 186—1946
- Integrated physics-mathematics course for the ESMDT program, Marsh W. White. 10: 54(A)—1942
- Natural science, survey courses in, Robert J. Havighurst. 3: 97—1935

- Physical science courses for liberal arts students, Reginald J. Stephenson. 12: 238(T); R. J. Stephenson. 12: 225—1944
- Physical science for students of liberal arts, J. J. G. McCue. 17: 47(T)—1949
- Physics survey courses *versus* physical science survey courses as agencies of general education, Willard Geer. 7: 389—1939
- Report on introductory general courses in physical science at the University of Chicago, Harvey B. Lemon. 2: 31(T)—1934
- Science survey, Ralph W. Hufford. 2: 125(A)—1934
- Some essential features and uncommon objectives of a physical science course for the general student, Duane Roller. 14: 390—1946
- Survey course of the physical sciences for college freshmen, Will V. Norris. 2: 80(A)—1934
- Survey courses in the physical sciences, G. F. Barnes. 6: 167(A)—1938
- Survey courses (Recent publications and teaching aids). 6: 165, 339—1938
- Two experiments in adult education at Wellesley College, Louise S. McDowell. 12: 174—1944
- What educational needs have favored the development of survey courses in the natural sciences? S. R. Powers. 3: 191—1935

Premedical Physics

- Course in physical instrumentation for medical and biological research, K. S. Lion and F. O. Schmitt. 15: 195(T)—1947
- On physics in relation to medicine, E. L. Harrington. 2: 176—1934
- Physics for premedical students, H. B. Williams. 1: 22(T)—1933
- Physics for students in the premedical and in the biological courses, E. L. Harrington. 5: 221(A)—1937
- Physics in premedical education, Otto Blüh. 17: 156—1949
- Physics in the premedical and premedical curriculum, Arthur G. Barkow. 16: 236—1948; A. G. Barkow. 16: 365(T)—1948
- Present trends in university courses in general physics for premedical students, E. L. Harrington. 18: 336(A); 428—1950
- Problem of the premedical course, Clyde B. Crawley. 6: 167(A)—1938
- Renewed interest in physics courses for medical students, Duane Roller. 12: 382—1944
- Second year physics course for biology and premedical students, L. L. Barnes. 18: 519(T)—1950
- Teaching of physics to premedical students, J. K. Robertson. 19: 131(L)—1951

Demonstrations

Acoustics

- Acoustic experiments in the teaching of optics, a demonstration lecture, Harold K. Schilling. 6: 41(T)—1938

- Acoustic plane and space gratings, experiments with, James W. McGrath. 7: 337—1939
- Apparatus for projecting phonodeik oscillations, J. G. Black. 1: 21(T), 49—1933
- Approaching the study of interference through acoustics, Harold K. Schilling and William Whitson. 4: 27—1936
- Auditory perspective and acoustic regeneration, simple demonstrations of, G. P. Brewington. 6: 214—1938
- Beats and the Doppler effect, demonstration of, Julius Sumner Miller. 18: 400(L)—1950
- Diffraction and interference of sound, demonstration of, Everett K. Jenne. 19: 397(A)—1951
- Doppler effect—a lecture demonstration, Arthur S. Jensen. 13: 39; A. S. Jensen. 13: 126(T)—1945
- Doppler effect, demonstrating the, C. W. Heaps. 9: 313—1941
- Doppler effect, demonstration of, John Zeleny. 10: 120—1942; Francis E. Fox. 12: 228; F. E. Fox. 12: 241(T)—1944; reply to Professor Zeleny, C. W. Heaps. 10: 121—1942
- Effect of intensity upon pitch, simple demonstration of, Arthur Taber Jones. 5: 139—1937
- Georgian chant—an illustrated lecture, C. Zech. 9: 244(T)—1941
- Harmonics and beats, demonstrating, Richard C. Hitchcock. 19: 329(A); 445—1951
- Koenig's interference apparatus, Paul F. Gaehr. 15: 426—1947
- Lecture demonstration of longitudinal waves, W. W. Sleator. 17: 178—1949
- Lecture demonstration of nodal patterns, E. R. Pinkston. 14: 138(A)—1946
- Lecture-table telephotophone, Richard M. Sutton. 2: 31(T)—1934
- Method for the determination of the speed of sound, demonstration of, Albert May. 8: 264(T)—1940
- Phonodeik, demonstration, G. G. Kretschmar. 4: 90—1936
- Propagation of sound, W. Llowarch. 11: 234(A)—1943
- Quantitative laboratory demonstrations in sound, Winthrop R. Wright. 8: 255—1940
- Radio fundamentals and speech quality, demonstration of, Lynn W. Jones. 10: 330—1942
- Resonant (singing) tubes, E. R. Pinkston. 15: 432(T)—1947
- Ripple tank and the Doppler effect, Hiram W. Edwards. 1: 92(A)—1933
- Schilling acoustic experiments for teaching optics, demonstration of, E. N. McWhite and C. W. Edwards. 7: 265(T)—1939
- Schlieren effect, demonstration of, C. A. Beck. 13: 126(T)—1945
- Some observations on Chladni figures, Julius Sumner Miller. 18: 534(L)—1950
- Some supersonic phenomena, demonstrations of, G. W. Pierce. 2: 31(T)—1934
- Specific acoustic resistance, demonstration of, John S. Rinehart. 18: 546—1950
- Standing sound waves demonstration on, Robert R. Meijer. 16: 360—1948
- Timbre of sound, demonstration of, Rose A. Carney and John J. Spokas. 20: 326(A)—1952
- Tuning forks, demonstration experiments with, Eric Rogers. 10: 166(A)—1942
- Two demonstrations in acoustics, Charles Williamson. 6: 40(T)—1938
- Visual demonstration of a measurement of the speed of sound in air, E. Tyler. 6: 277—1938
- Visual method for demonstrating refraction of sound, Haym Kruglak and Charles C. Kruse. 8: 260—1940
- Wave fronts, attenuation, and diffraction, demonstration of, W. Cullen Moore. 20: 61—1951

Atoms and Molecules

- Atomic structure, demonstrating, Ralph E. Wellings. 1: 57(A)—1933
- Atoms demonstration, Staley and Shriner. 18: 318(T)—1950
- Device for illustrating atom models, Carl Van Valkenburg. 8: 262—1940
- Exhibiting Brownian movement, appliance for, Louis E. James and W. James Lyons. 2: 25—1934
- Experimental demonstrations in molecular physics, Hans Mueller. 2: 31(T)—1934
- Model to illustrate the motion of a diatomic rotator with two degrees of freedom, Lewis Simons and E. H. Smart. 1: 57(A)—1933
- Molecular motion, demonstration of, W. S. Von Arx. 13: 205(A)—1945
- Simple demonstration model of a vibrating molecule, W. H. J. Childs. 6: 169(A)—1938
- Simple device for demonstrating Brownian movement in gases, D. A. Wells and William Lange. 1: 26(A)—1933

Electricity

- A.c.-d.c. voltage relationships, simple apparatus for demonstrating, Leo Seren. 16: 449—1948
- Alternations of a.c. current, demonstration of, Paul E. Wilson. 3: 46(A)—1935
- Analogy to the electromotive force, potential difference and resistances in a circuit, simple demonstration of, Leonard B. Loeb and H. M. Herreman. 4: 34—1936
- Apparatus for demonstrating and mapping an electric field, Rev. B. Brinker. 18: 318(T)—1950
- Apparatus for the electrolysis and synthesis of water and the photosynthesis of HCl, J. G. Black. 1: 119—1933
- Audible method of demonstrating transient oscillations in single and coupled tuned circuits, Herbert J. Reich. 2: 27—1934
- Automatic chart plotter for lecture room demonstrations, Alfred O. Nier and R. B. Thorness. 19: 416—1951
- Behavior of a carbon-filament lamp in a magnetic field when energized with (a) alternating current, (b) direct current, Julius Sumner Miller. 17: 447(L)—1949

- Bells and spark coils, G. Ghey. 9: 317(A)—1941
- Condensers in a.c. and d.c. circuits, W. B. Pietenpol. 15: 197(A)—1947
- Convenient projection electroscope, Harry E. Hammond. 3: 39—1935
- Damped electrical oscillation demonstrated with a cathode-ray oscilloscope, Hugh Ivey. 18: 400(L)—1950
- D.c. selsyn, demonstration of, C. A. Beck. 11: 232(T)—1943
- Detonation of electrolytic gas, A. F. Williston. 11: 300(A)—1943
- Demonstration of the dielectric constant of air, E. W. Cheney. 15: 515—1947
- Demonstration of eddy currents in conductors of various shapes, D. Brown. 1: 125(A)—1933
- Effect of a shunt, simple demonstration of, Arthur Taber Jones. 3: 138—1935
- Electric field lines, demonstrating, L. Gorse. 11: 234(A)—1943
- Electrical resonance, demonstration of, F. E. Fox. 8: 264(T)—1940
- Electromagnetic induction, demonstration experiments in, D. S. Ainslie. 18: 519(A)—1950; 19: 232—1951
- Emission current through a glass bulb, demonstration of, K. S. Lion. 11: 297—1943
- Experiment to demonstrate that "frictional" electricity depends on contact potential, Stanley Anderson. 4: 144—1936
- Frequency of alternating current, G. K. Schoepfle. 15: 363(A)—1947
- Frequency of the alternating current by visual method, David L. Cook. 1: 125(A)—1933
- Glow tube flasher for demonstrating condenser properties, V. Wouk. 13: 415—1945
- High voltage and induction heating demonstrations, Richard Aurandt. 19: 398(T)—1951
- Illustrating the flow of electricity in circuits, demonstration apparatus for, Frank R. Pratt. 3: 189—1935
- Improved apparatus for demonstrating an oscillatory discharge, Edwin S. Fox. 19: 486(A)—1951
- Induced electromotive force, new apparatus for demonstrating, Hermann Haemmerle. 17: 317—1949
- Lecture demonstration of coupled systems employing selsyn motors to provide variable coupling, Lloyd W. Morris. 19: 443(A)—1951
- Lecture demonstration of simple transient electrical phenomena, L. P. Delsasso. 15: 468—1947
- Mechanical analogs of electric circuits, demonstration experiments, Eric M. Rogers. 14: 318—1946
- Mechanical method of showing alternating current phase relations, Waldemar Noll and William Nickell. 7: 265(T)—1939
- Mechanical model illustrating, the principle of the cyclotron, F. A. B. Ward. 8: 205(A)—1940
- Mechanical switching arrangement for oscillograph demonstrations of certain electric transients, L. E. Smith, Jr. 9: 50—1941
- Megohmmeter, demonstration of, G. Vassallo. 13: 57(T)—1945
- Method of simultaneously projecting two periodic curves on a cathode-ray oscillograph, F. E. Kennard. 6: 169(A)—1938
- Modification of the traditional demonstration of the e.m.f. of self-induction, Grant O. Gale. 5: 229—1937
- Neon lamps for electrical measurements and demonstrations, D. S. Ainslie. 1: 119—1933
- Oscillatory discharge of a condenser, demonstration of, H. E. Hammond. 10: 162—1942; Kenneth V. Manning. 18: 333(A)—1950
- Peltier effect, demonstration of, Robert W. Koza. 13: 62, 266(A)—1945
- Phase differences in alternating-current circuits, stroboscope for the demonstration of, E. Hobart Collins. 11: 38—1943
- Phase relations in an inductance demonstrated at low frequency, G. E. Feiker and W. B. Wadsworth. 7: 60—1939
- Phase shift, demonstration of, Franklin Miller, Jr. 19: 366—1951
- Potentiometer, demonstration, P. Bender. 15: 435(A)—1947
- Production of a variable low frequency alternating voltage and its application to the study of transient and steady state phenomena, Lloyd W. Morris. 6: 44(A)—1938
- Relationships between ac and dc voltage, demonstration of, Albert V. Baez. 19: 399(A)—1951
- Relationships between ac and dc voltage, demonstration on, Albert V. Baez. 20: 457(L)—1952
- Rotating field, demonstrating, Charles R. Mingins. 5: 137—1937
- Simple and effective device for production of Lissajous' figures with an oscillograph, G. G. Kretschmar. 8: 321—1940
- Simple arrangement for observation of electrical transients, Edward H. Green. 5: 181—1937
- Simple demonstration telephone switchboard and its operation, Lloyd W. Taylor and Paul F. Brown. 5: 215—1937
- Simple transient oscillatory electrical phenomenon, demonstration of, L. P. Delsasso. 15: 360(T)—1947
- Special charging rod for demonstrations in electrostatics, D. S. Ainslie. 12: 43—1944
- Student computation in electricity, demonstration experiments to provide data for, T. J. Blisard and B. A. Greenbaum. 20: 399(A)—1952
- Teaching electric circuits, demonstrator boards for, Haym Kruglak. 14: 273—1946
- Temperature coefficients of resistance, positive and negative, W. B. Pietenpol. 14: 138(A)—1946
- Ten demonstrations in piezoelectricity, K. S. Van Dyke. 18: 519(T)—1950
- Transients, demonstration with cathode-ray oscillograph, T. B. Brown. 9: 244(T)—1941
- Unique oscillographic demonstrations, Frank E. Hoecker and A. Graham Asher. 8: 59—1940
- Van de Graaff generator for demonstration purposes, Richard H. Waters. 19: 195(T)—1951

Variation of electrical resistance with temperature, demonstration of, John J. Heilemann. **1**: 17—1933
 Volta effect, demonstration of, E. F. Fox, **11**: 231(T)—1943

Electronics

Analogue computer for differential equations, high speed counter of several thousand per second, super stop watch, a memory tube, demonstration of, Cyril N. Hoyler. **17**: 460(T)—1949
 Circular polarization of ionospherically reflected radio waves, simple demonstration of, Edward V. Appleton **11**: 236(A)—1943
 Classroom model of vertical ionospheric reflection, J. A. Pierce. **17**: 542—1949
 Compact thyratron demonstration apparatus, T. A. Benham. **12**: 166—1944
 Edison effect and the rectifying action of a diode, demonstrations of, Simon Sonkin. **5**: 41—1937
 Electronic demonstrator for damped electric oscillations, W. G. Marburger. **20**: 516—1952
 400-mc oscillator, demonstration of, Thomas B. Brown. **7**: 263(T)—1939
 Half-wave and full-wave rectification, demonstration of, Joseph S. Rosen. **12**: 174—1944
 Improved apparatus for demonstrating an oscillatory discharge, Edwin S. Fox. **19**: 486(A)—1951
 Mechanical model of a vacuum tube amplifier, Louis R. Weber. **5**: 133—1937
 Modulation theory, demonstration of, T. B. Brown. **13**: 125(T)—1945
 Oscillograph outfit, demonstration, H. Lloyd. **3**: 141(A)—1935
 Radio side bands demonstration, Robert J. Dwyer. **11**: 109—1943
 Radio tube demonstration, Austin J. O'Leary. **3**: 134—1935
 Simple demonstration of the characteristic of an electron tube compared with that of an Ohm's law resistance, Eric M. Rogers. **8**: 70(A)—1940
 Unique classroom oscillographic demonstrations, Frank E. Hoecker. **7**: 261(A)—1939
 Visual demonstration of vacuum tube characteristics, Edward H. Green. **9**: 191—1941
 Voltage amplification of triode, demonstration of, F. L. Talbot. **11**: 226, 231(T)—1943
 Wave shaping demonstration, H. Fulton. **19**: 196(T)—1951

Electrons and Ions

Classroom demonstration of the nature of the charge on the electron, A. D. Hummel. **8**: 71(A)—1940
 Conception and demonstration of electron waves, C. J. Davisson. **1**: 29(A)—1933
 Effect of an electric lens on water jets, S. Y. Sze and L. K. Su. **4**: 139—1936
 Electron paths perpendicular to a magnetic field, demonstration of, R. Stuart Mackay. **17**: 444—1949
 Electrostatic bubble gun for demonstrating deflection of charged particles, L. P. Delsasso. **15**: 360(T)—1947

Lecture room determination of the velocity and c/m of the electrons in a cathode-ray oscillograph, H. D. Smyth and C. W. Curtis. **6**: 158—1938
 New lecture table demonstration to show that cathode rays leave the cathode normally, Chas. T. Knipp. **2**: 184(A)—1934
 Particle motion in an inverse square field of force, demonstration of, C. L. Henshaw. **11**: 47(A)—1943
 Removal of ions from convection currents, demonstration of, John J. Heilemann. **2**: 116—1934
 Simple demonstration of Child's law for positive ions, Winston E. Kock. **6**: 152—1938
 Uses for electrically charged balloons in the demonstration lecture, Paul Rood. **14**: 445—1946

Fluid Mechanics

Another demonstration of Bernoulli principle, F. E. Kester. **13**: 349—1945
 Archimedes' principle and the hydrostatic paradox—simple demonstrations, George M. Koehl. **17**: 579—1949
 Barometer, demonstration, H. W. LeSourd. **14**: 213(A)—1946
 Bernoulli's principle, demonstration of, E. Scott Barr. **19**: 248(L)—1951
 High-vacuum technique—an undergraduate study, Harvey E. Wegner. **16**: 412(A)—1948
 Hydrostatic paradox: phase II, demonstration of, Laurence E. Dodd. **19**: 195(A)—1951
 Illustration of a conservation paradox, Richard M. Sutton. **4**: 26—1936
 Interesting application of Archimedes' principle, John M. Chilton. **16**: 57—1948
 Liquid pressure, demonstration of, H. W. LeSourd. **14**: 278(A)—1946
 Mariotte's bottle, E. L. McCarthey. **2**: 184(A)—1934
 Model to demonstrate the pressures effective in deep-sea diving, L. E. Dodd. **7**: 261(A)—1939
 Neglected lesson from the Cartesain diver, Paul Kirkpatrick. **10**: 160—1942
 Physics of deep-sea diving, Laurence Ellsworth Dodd. **8**: 181—1940
 Pressure-gauge tester, demonstration with, B. L. Brinker and A. P. Brinker. **14**: 341(T)—1946
 Properties of air flow, two experimental demonstrations of, G. P. Brewington. **11**: 47(A)—1943
 Some lecture and laboratory experiments in aeronautics, E. G. Richardson. **2**: 22—1934
 Stroboscopic observation of jets of water, George D. Rock and Albert May. **7**: 248—1939
 Water hammer made of metal, demonstration, Harold K. Schilling and Henry L. Yeagley. **12**: 230, 239(T)—1944
 Water runs up hill, or does it? John G. Betts. **19**: 195(A)—1951
 Wind-machine, demonstration, Wilfrid J. Jackson and Frank R. Pratt. **9**: 57(A)—1941

General

A.A.P.T. book on demonstrations, Richard M. Sutton. **3**: 85—1935

- Among my souvenirs, Richard L. Feldman. **6**: 105—1938
- Animations, demonstrating with, Robert L. Petry. **6**: 45(A)—1938
- Annual exhibit of new devices. **17**: 460(T)—1949; **18**: 462(T)—1950
- Apparatus for demonstrations, T. M. Hahn. **5**: 285(T)—1937
- Astronomy survey course, demonstrations useful for, Lewis Balamuth. **7**: 196—1939
- Challenging problems for general physics classes, Louis R. Weber. **14**: 139(A)—1946
- Comparison of the effectiveness of the demonstration method and of individual laboratory work in the teaching of physics in secondary schools, Julian M. Blair. **5**: 221(A)—1937
- Concerning lecture demonstrations, Julius Sumner Miller. **17**: 582(L)—1949
- Demonstrations and exhibits, F. W. Cooke, C. A. Culver, W. H. Eller, Z. V. Harvalik, G. W. Heitkamp, W. J. Hooper, R. R. Palmer, C. R. Smith, L. W. Taylor, E. R. Wightman, and J. W. Woodrow. **14**: 276(T)—1946; W. D. Bemmels, M. B. Brenne-man, D. L. Eaton, F. E. Christenson and J. W. Buchta, R. T. Harling, Z. V. Harvalik, H. Jensen, M. Olson, R. R. Palmer, A. G. Rouse, H. K. Schilling and I. Rudnick, C. R. Smith, M. N. States, L. A. Turner, J. A. Van den Akker. **15**: 433(T)—1947; W. D. Bemmels, Jerome Brewer, J. H. Clements, R. H. Cook, R. L. Edwards, J. A. Eldridge, G. O. Gale, Newell S. Gingrich, J. W. Hake, Roscoe E. Harris, Z. V. Harvalik, W. J. Hooper, H. C. Jensen, J. C. Jensen, K. G. Larson, Walter G. Marburger, Paul E. Martin, Waldemar Noll, Donald Olson, Milward T. Rodine, Louis Shapiro, Clarence R. Smith, Orrin H. Smith, Richard M. Sutton, Francis E. Throw, J. A. Van den Akker, and Earl W. Thomson. **16**: 366(T)—1948
- Demonstration experiment round table, R. H. Cook, H. C. Jensen, M. J. Pryor, Paul Rood. **20**: 464(T)—1952
- Demonstrations experiments, A. F. Johnson, R. M. Morrow, R. H. Mortimore, H. K. Schilling, C. R. Smith, R. D. Spangler, and V. F. Swaim. **7**: 200(T)—1939; Eric M. Rogers. **10**: 55(A)—1942; E. M. Rogers. **14**: 136(T)—1946; G. O. Gale, H. W. Gould, D. L. Eaton, A. W. Hanson, J. Harty, F. E. Hoecker, W. J. Hooper, and J. C. Jensen. **7**: 200(T)—1939; John Zeleny. **9**: 173—1941; Julius S. Miller. **10**: 162—1942; Waldemar Noll. **19**: 329(A)—1951
- Demonstration lecture, V. E. Eaton. **18**: 519(T)—1950
- Demonstration lecture—art or craft? V. E. Eaton. **16**: 58(T)—1948
- Demonstration lecture as an art: introductory remarks, R. M. Sutton. **18**: 519(T)—1950
- Demonstrations, W. N. St. Peter, R. C. Hitchcock, M. G. Zabetakis, W. C. Colwell, and C. O. Wiggs. **15**: 361(T)—1947
- Development of a lecture demonstration experiment, L. E. Dodd. **16**: 325(T)—1948
- Display project, I. V. Ragsdale. **9**: 194(A)—1941
- Education?—or merely training?! VIII, a demonstration that resolved a dilemma, George Forster. **19**: 195(A)—1951
- Educational demonstration program, Capt. W. B. Harris and Sgt. J. C. Joyce. **14**: 70(T)—1946
- Experiments, elementary demonstration, Eric M. Rogers. **12**: 239(A)—1944
- Four inexpensive lecture table experiments, Richard M. Sutton. **8**: 69(A)—1940
- Fourier components, demonstration of the meaning of, Agnes Townsend. **14**: 137(A)—1946
- Further remarks on demonstration experiments, Julius Sumner Miller. **20**: 184(L)—1952
- Gadgets used in simple demonstrations, R. L. Feldman. **17**: 391(T)—1949
- High school students, demonstration lecture for, O. Blackwood. **9**: 58(A)—1941
- Historic demonstrations, O. Oldenberg. **20**: 111—1952
- Independent measurement, demonstration of, Norman Campbell. **12**: 115(A)—1944
- Interesting exhibit, J. L. Ryerson. **17**: 520(L)—1949
- Laboratory demonstrations, P. L. Copeland, C. A. Culver, R. L. Dolecek, R. E. Harris, A. G. Hoyem, R. A. Nelson, C. R. Smith, E. R. Wightman, and R. C. Wyckoff. **8**: 201(T)—1940; P. L. Copeland, H. L. Cunningham, R. R. Hancox, J. Harty, R. E. Harris, W. J. Hooper, J. C. Jensen, A. F. Johnson, L. A. Rohret, and V. F. Swaim. **9**: 192(T)—1941
- Large-sized apparatus in lecture demonstrations in physics, W. H. Kadesch. **19**: 483(T)—1951
- Lecture-demonstrations, J. G. Black. **7**: 264(T)—1939
- Lecture demonstrations as a staff project, Homer L. Dodge. **4**: 51(T)—1936
- Lecture demonstrations in elementary physics, N. Henry Black. **2**: 91—1934
- Lecture-demonstrations (Recent publications and teaching aids). **6**: 340—1938
- Lecture experiments *versus* demonstrations, G. Wendt. **15**: 359(A)—1947
- Lecture room and its equipment, J. W. Buchta. **13**: 120(T)—1945
- Mobile demonstration laboratory of the Pennsylvania summer EDT program, Harold K. Schilling. **10**: 54(A)—1942
- New equipment, demonstration of, R. E. Harris. **17**: 459(T)—1949
- New equipment, demonstrations of some, John G. Moorhead. **10**: 211(T)—1942
- On classroom demonstrations, W. W. Robertson. **17**: 19—1949
- Outlines of lecture demonstrations, John A. Eldridge. **9**: 57(A)—1941
- Physics exhibits that have been given at Goucher College, M. K. Frehafer. **8**: 264(T)—1940
- Physics lecture room and its equipment, J. W. Buchta. **13**: 189—1945
- Place of lecture demonstrations in an elementary physics course, N. H. Black. **2**: 31(T)—1934

- Plan for developing a better technique in giving science demonstrations, Edith M. Selbert. **1**: 62(A)—1933
- Projection of small scale phenomena, Howard S. Seifert. **19**: 195(A)—1951
- Science on television. A demonstration, Edward R. Bascom. **19**: 485(T)—1951
- Selected experiments, demonstration of, A. E. Caswell and D. Hunter. **9**: 183(T)—1941
- Several lecture demonstrations, L. E. Dodd. **14**: 70(T)—1946
- Several simple demonstrations, Julius S. Miller. **9**: 312—1941
- Short demonstration experiments without words, Eric M. Rogers. **18**: 520(T)—1950
- Simple demonstration experiments, G. M. Koehl. **17**: 232(A)—1949
- Simple equipment, demonstrations with, Gordon M. Dunning. **19**: 482(A)—1951
- Simple television demonstration, Robert E. Benn. **17**: 437—1949
- Some effective lecture-room demonstrations, D. C. Miller. **2**: 31(T)—1934
- Some laboratory and demonstration aids, C. C. Kiplinger. **4**: 43—1936
- Some lecture demonstrations in elementary physics, W. S. Webb and J. Schroeder. **13**: 57(T)—1945
- Some simple demonstrations, E. C. Weaver. **12**: 181(A)—1944
- Some stepped-up lecture table experiments, Richard M. Sutton. **10**: 56(A), 141—1942
- Some useful demonstration apparatus, N. H. Black. **7**: 426(A)—1939
- Speaking of physics: simple demonstrations, G. M. Koehl. **16**: 324(T)—1948
- Steiner's theorem, model for the demonstration of, James T. Curtis. **15**: 93—1947
- Student exhibits. Arthur Matthias, Lester Zelle, Alfred Schwaneke, Barthold Bouricius, and Robert Jones. **16**: 366(T)—1948
- Television, demonstration lecture on, T. F. Joyce. **9**: 54(T)—1941
- Three demonstration experiments, Eric M. Rogers. **18**: 333(A)—1950
- Three inexpensive demonstration and laboratory aids, W. S. Drury. **7**: 205(A)—1939
- Three lecture demonstrations, Francis W. Sears. **19**: 329(A)—1951
- Three pieces of lecture room apparatus, demonstration of, Richard M. Sutton. **5**: 45(A)—1937
- Two demonstration devices, J. S. Miller. **8**: 330(A)—1940
- Two experiments in the building of plywood models to demonstrate surfaces, Norman Lapworth and L. E. Dodd. **7**: 262(A)—1939
- Two lecture demonstrations, W. W. Sleator. **19**: 486(A)—1951
- Two new exhibits, R. S. Clay. **7**: 269(A)—1939
- Two simple demonstrations and an application of physics in the home, A. D. Hummel. **9**: 55(A)—1941
- Unusual laboratory experiments and demonstrations developed at Texas Christian University, Newton Gaines. **16**: 363(T)—1948
- Use of public demonstration lectures to popularize physics, O. Blackwood. **8**: 139(T)—1940
- Uses of television techniques in demonstration apparatus, H. W. Fulbright. **18**: 334(A)—1950
- What remains twenty years after a demonstration, L. I. Bockstahler. **18**: 519(T)—1950

Heat

- Adiabatic expansion, formation of clouds, E. R. Pinkston. **15**: 432(T)—1947
- Boiling water at reduced pressure, demonstrating, R. C. Hitchcock. **13**: 126(T)—1945
- Boyle's law—Dalton's law problem solved with gauge pressures, M. D. Adams. **19**: 399(T)—1951
- Convection currents, E. J. Williams. **7**: 350(A)—1939
- Cooling effect of evaporation. A lecture demonstration, Alton L. Markley. **2**: 123(A)—1934
- Critical phenomena, demonstration of, Bruce H. Sage. **9**: 245(T)—1941; B. H. Sage and H. H. Reamer. **9**: 310—1941
- Cryophorus, dry ice with CO₂, freezing by reducing pressure, R. A. Goodwin. **15**: 432(T)—1947
- Dalton's law of vapors, John Satterly. **13**: 50—1945
- Explosion by shock, yellow phosphorus and carbon disulfide, W. M. Smedley. **15**: 433(T)—1947
- Extension of a simple experiment designed to show the heat generated by a spark, Julius Sumner Miller. **17**: 447(L)—1949
- Fog production, demonstration of, J. J. Coop. **9**: 242—1941
- Freezing water by evaporation, Haym Kruglak and Paul M. Loofboro. **12**: 48—1944
- Gas law demonstration apparatus, F. C. Hickey. **13**: 58(A)—1945
- Gas laws simply demonstrated, Marvin J. Pryor. **13**: 421—1945
- Improved Franklin's flask and simplified cryophorus, Isay Balinkin. **1**: 55(T), 86—1933
- Improved heat of vaporization demonstration, V. R. Rawson. **8**: 270(A)—1940
- Kinetic molecular theory of gases, apparatus to demonstrate, L. de St. Paër. **8**: 330(A)—1940
- Kinetic theory, demonstration in, P. H. Miller, Jr. and Eugene L. Langberg. **10**: 20—1942
- Kirchhoff's law of radiation, demonstration of, Mario Iona, Jr. **15**: 196(A)—1947
- Lecture demonstrations of Boyle's law and of change of state, F. B. Dutton. **9**: 133(A)—1941
- Linear thermal expansion, demonstrating, using the catenary, Richard C. Hitchcock. **13**: 122(A); Richard C. Hitchcock and Mark W. Zemansky. **13**: 329—1945
- Production of liquid oxygen as a lecture table demonstration, Chas. T. Knipp. **2**: 184(A)—1934
- Projection thermometer, some demonstrations with, W. T. Scott and J. J. G. McCue. **20**: 394(A)—1952
- Refrigeration demonstration, E. F. Shumaker. **12**: 181(A)—1944

Simple device for demonstrating relative specific heats, Paul R. Gleason and Clement L. Henshaw. 7: 262(A)—1939

Simple thermocouple for demonstrating the properties of thermal radiation, C. W. Heaps. 5: 87—1937

Thermal diffusion column, demonstration, B. B. McInteer and C. E. Schensted. 17: 417—1949

Thermal diffusion, demonstration of, W. M. Spicer. 14: 278(A)—1946

Triple point for water, demonstration of, Earland Ritchie. 20: 387(A)—1952

Triple-point for water, lantern demonstration of, W. F. Powers. 4: 40—1936

Two-dimensional kinetic theory model, Thomas B. Brown. 9: 58(A), 168—1941

Vaporization of mercury, demonstration of, H. C. Froelich. 10: 273(A)—1942

Visual demonstration of the evaporation of mercury, Wesley G. Leighton and Philip A. Leighton. 3: 94(A)—1935

Light

Aberration in a convex spherical mirror, model to demonstrate, F. R. Hirsh, Jr. 14: 70(T)—1946

Carpenters' rule: an optical instrument, Paul Kirkpatrick. 13: 116—1945

Coarse diffraction gratings for lecture demonstration and laboratory, H. M. Reese and N. S. Gingrich. 14: 324—1946

Color and color photography, demonstrations for, H. C. Colton. 13: 120(T)—1945

Color demonstration apparatus, J. A. Van den Akker. 16: 1—1948

Color demonstration with a small projection lantern, V. E. Eaton. 20: 465(A)—1952

Color experiments with a lecture table lantern, V. E. Eaton. 7: 70(A)—1939

Color illumination, demonstration of, T. L. Young. 13: 57(T)—1945

Color mixing, a demonstration, Charles H. Skinner. 14: 276(T)—1946

Color spectrograms for demonstration purposes, Hans H. Kretschmer. 13: 111—1945

Complementary color photography, Everett F. Cox. 7: 70(A)—1939

Demonstration monocular, Howard N. Maxwell. 20: 310—1952

Device for showing object and image positions for a thin lens, Richard C. Hitchcock. 14: 138(A)—1946

Diffraction of light, an experimental demonstration, F. A. Molby. 5: 78—1937

Diffraction of light by supersonic waves in liquids; apparatus for demonstration and for an intermediate laboratory experiment, Alva W. Smith and Lewis M. Ewing. 8: 57—1940

Dynamic demonstration of nitrogen afterglow, R. Stuart MacKay. 18: 319—1950

Dynamical demonstration of $f=R/2$ for a concave spherical mirror, Vernon L. Bollman. 18: 394(A); 400(L)—1950

Elliptic mirror for lecture demonstration, J. Smithson and W. T. Fenhagen. 19: 442(T)—1951

Emission and absorption of sodium vapor, demonstration of, F. Blaha. 19: 130(L)—1951

Fluorescence demonstration, C. K. Christensen. 15: 361(T)—1947

Fresnel diffraction demonstrated with a ripple tank, H. D. Rix. 18: 334(A)—1950

Geometrical optics, apparatus for demonstrations in, K. H. Fried, E. H. Green, and W. H. Mais. 8: 43—1940

Home-brewing the rainbow—and understanding it, Gaylord Johnson. 1: 93(A)—1933

Image formation by a convex lens, demonstration of, Waldemar Noll. 17: 391(A)—1949

Inexpensive apparatus for lecture and laboratory demonstrations in polarized light, Leighton B. Morse. 5: 221(T)—1937

Interference figures, G. Ghey and J. S. Barlee. 14: 213(A)—1946

Interference of light waves, demonstration of, Gordon M. Dunning. 19: 136(T)—1951

Inversion of the retinal image, Leonard Eisner. 20: 308—1952

Lantern slide color demonstration, Sheldon Brown. 17: 164(T)—1949

Lecture room optical disk, H. E. Carr, W. T. Fenhagen, and J. R. Smithson. 18: 393(T)—1950

Lens aberrations—a classroom demonstration, Arthur S. Jensen. 13: 113—1945

Lens aberrations, classroom demonstration of, A. S. Johnson. 12: 241(T)—1944

Long-wave fluorescence, demonstrating, H. D. Murray. 8: 142(A)—1940

Luminescence, lecture demonstrations of, Charles W. Edwards. 10: 212(A)—1942

Mechanical demonstrator for Fermat's principle, W. Cullen Moore. 18: 333(A)—1950; 19: 1—1951

Model to demonstrate spherical aberration of a convex spherical mirror, F. R. Hirsh, Jr. 14: 66—1946

Novel optical screen for classroom demonstrations, Joseph H. Howey. 1: 27(A)—1933

On the pinhead shadow inversion phenomenon, F. R. Hirsh, Jr., and E. M. Thorndike. 12: 164—1944

Optical instruments, demonstration of, Mario Iona, Jr. 14: 64—1946

Phase contrast principle, demonstrating, J. Elmer Rhodes, Jr. 17: 70—1949

Phase difference between ordinary and extraordinary beams, demonstrations of, J. G. Winans. 19: 398(T)—1951

Physical phases of fluorescent lamps, with demonstrations, J. C. Garman. 9: 183(T)—1941

Pohl's interference experiment, demonstration of, Mark W. Zemansky. 17: 232(A)—1949

Principles of interference, demonstrating, Harald Perlitz. 4: 140—1936

Principles of interference, method of demonstrating, Charles E. Miller. 3: 75—1935

- Projection of thin-film interference fringes, Thomas B. Brown. **10**: 55(A)—1942
- Refraction of light at a boundary between two media of different indices of refraction, model to demonstrate, F. R. Hirsh, Jr. **16**: 57(T)—1948
- Research on natural illumination in school rooms, demonstration of, R. A. Boyd. **19**: 136(T)—1951
- Shadow projection lamp for electroscope and radiometer, J. G. Black. **1**: 15, 21(T)—1933
- Simple color demonstration, Hugh F. Henry. **15**: 361(A)—1947
- Simple polarized light demonstration, Charles A. Fowler. **19**: 398(A)—1951
- Simple telephotophone for communication on a beam of light, Richard M. Sutton. **2**: 173—1934
- Simplified and compact tricolor mixing device, Calvin N. Warfield. **6**: 211—1938
- Some demonstration experiments in light, John Zeleny. **10**: 116—1942
- Some demonstrations with polarized light, Francis T. Jones. **8**: 325(T)—1940
- Spherical aberration of a concave spherical mirror, model to demonstrate, F. R. Hirsh, Jr. **13**: 267—1945
- Stroboscope, demonstrations with, John S. O'Connor. **7**: 263(T)—1939
- Stroboscopic demonstration and high speed motion pictures, Newell S. Gingrich. **6**: 166(T)—1938
- Study of light, demonstrations in, Ralph Loring. **17**: 459(T)—1949
- Synthetic rutile, Wilson W. Woodcock, Jr. **19**: 323(L)—1951
- Techniques for demonstrating color phenomena, Isay A. Balinkin. **17**: 231(T)—1949
- Ultraviolet spectrum, lecture-demonstration of, R. Rollefson. **7**: 259—1939
- Use of a suspension of scattering particles as optical analyzer, J. K. Robertson. **7**: 259—1939; Erratum. **7**: 429—1939
- Use of color and illumination in physics lecture demonstrations; M. W. White. **12**: 179(T)—1944
- Water prisms and a ray-tracing device for demonstrations in optics, Ting Supao. **16**: 52—1948

Magnetism

- Chladni plates by magnetostriction, E. R. Pinkston. **15**: 432(T)—1947
- Demonstrating the diamagnetism and paramagnetism of liquids, R. E. Vollrath. **16**: 155—1948
- Effect of area of contact on the tractive effort of a magnet, Simon Sonkin. **6**: 104—1938
- Ferromagnetic action, model of, R. M. Bozorth and J. F. Dillinger. **5**: 157—1937
- Lecture demonstration for the three types of magnetic substances, R. E. Trumble, Jr. **18**: 393(T)—1950
- Magnetic amplifiers demonstration, W. E. Sargeant. **17**: 460(T)—1949
- Magnetic field inside a current-carrying conductor, demonstration of, Mario Iona, Jr., and John P. Karbler. **16**: 121(A)—1948
- Magnetic heat-motor, John Mills. **5**: 40—1937
- Magnetized ring, demonstration experiment, Eric M. Rogers. **14**: 273—1946
- Magnetostriction, demonstration unit for, Jun Hino and George Sandoz. **18**: 515—1950
- Model of magnetization, F. W. Warburton. **4**: 213—1936
- Models to illustrate gyromagnetic and electron-inertia effects, S. J. Barnett. **5**: 1—1937
- Precession of a magnetic top, George T. Rado. **12**: 29—1944
- Rotating magnetic field, demonstrating, J. J. Coop. **6**: 37—1938

Mechanics

- Acceleration, demonstrations of, H. Rees Mitchell. **18**: 516—1950
- Advanced dynamics, demonstration laboratory for, D. A. Wells. **13**: 147—1945
- Banked curves, demonstration of, Everett Haynes. **17**: 93(A)—1949
- Center of gravity, demonstration of, moment of inertia and the period of a compound pendulum, W. B. Pietenpol. **8**: 70(A)—1940
- Centrifugal force with sound effects (demonstration), M. D. Adams. **19**: 399(T)—1951
- Classical experiment illustrating the notion of "jerk," P. LeCorbeiller. **13**: 56(A)—1945
- Classical problem in analytical mechanics, Julius Sumner Miller. **20**: 455(L)—1952
- Coefficients of friction greater than unity, B. W. Bartlett. **12**: 48—1944
- Complete physics course through electric trains, Harry Peach. **20**: 314(L)—1952
- Conservation of energy, demonstration of, T. J. Blisard and C. H. Duursema. **20**: 400(A)—1952
- Coriolis force, simple demonstration of, Arthur A. Klebba and Henry Stommel. **19**: 247—1951
- Demonstration gyroscope, V. E. Eaton. **18**: 334(A)—1950
- Device for demonstrating constancy of angular momentum, Mason E. Hufford. **13**: 417—1945
- Elastic impacts, demonstration of, R. M. Bell. **15**: 163(T)—1947
- Equilibrium of a rectangular body resting on a cylinder, demonstration of, Virgil M. Hutchison and Harry Hill. **15**: 190—1947
- Euler's angles, demonstration of, L. Horn. **17**: 460(T)—1949
- Experiment demonstration to determine rifle bullet velocity, Donald Worth. **19**: 250(A)—1951
- Experiment to demonstrate a paradox of rotation, Richard M. Sutton. **4**: 49(T)—1936
- Experimental examples in dynamics, Carl A. Ludeke. **9**: 162—1941
- Foucault pendulum, demonstration, M. J. W. Phillips. **10**: 217(A)—1942
- Gyroscopes—a demonstration lecture, Jarvis Todd. **10**: 165(T)—1942
- Impact ball apparatus, some interesting aspects of, Seville Chapman. **9**: 357—1941

- Inertia, demonstration of, Roger M. Morrow. 11: 351—1943
- Inertial significance of mass and the conservation of momentum, two experiments to demonstrate, Austin J. O'Leary. 14: 120; Erratum. 14: 214—1946
- Intermediate mechanics, some demonstrations in, Mario Iona, Jr. 14: 139(A)—1946
- Large, low speed gyroscope, demonstrations with, Harold K. Schilling. 14: 116; 14: 136(T)—1946
- Large-scale demonstration of the flight of projectiles, Gilbert Henry. 10: 202—1942
- Larger gyroscope, George P. Unseld. 14: 274—1946
- Law of inertia, experiment on, W. V. Burg. 12: 181(A)—1944
- Lecture demonstration of law of conservation of mass, Irving A. Cowperthwaite. 5: 224—1937
- Lecture on momentum, experiments for, Richard T. Cox. 17: 391(T)—1949
- Lecture-room measurement of the value of g , Bela G. Kolossvary. 20: 312(L)—1952
- Mach law of inertia, experiments to demonstrate, Austin J. O'Leary. 15: 196(T)—1947
- Mechanics of rotation—a demonstration lecture, Richard M. Sutton. 6: 166(T)—1938
- Mechanics, some demonstrations in, K. H. Fried, E. H. Green, and W. H. Mais. 14: 193—1946
- Mechanics, some demonstrations in, Mario Iona, Jr. 14: 252—1946
- Model vernier for projection, John J. Heilemann. 3: 72—1935
- Moment of inertia experiments, P. J. Rice, Jr. 9: 312—1941
- Momentum: (a) gun ballistic pendulum, zero vector and algebraic momentum; (b) billiard balls on wires, H. E. Carr. 15: 432(T)—1947
- New impact apparatus, Harold K. Schilling and Henry Yeagley. 15: 60—1947
- Pile driver, demonstration of, Andrew Longacre. 4: 144—1936
- Problem involving the order of impacts, Seville Chapman. 9: 56(A)—1941
- Progressive release of potential energy: two demonstrations, L. E. Dodd. 14: 276(T)—1946
- Projectile motion, three demonstration experiments on, Richard M. Sutton. 12: 104—1944
- Propagation of energy—a lecture demonstration, Arthur S. Jensen. 13: 52—1945
- Quantitative treatment of the racing-roller demonstration, W. P. Berggren and M. E. Gardner. 9: 243—1941
- Rocket-propelled airplane, demonstration of, Vernon L. Bollman. 19: 195(A)—1951
- Selected simple demonstration experiments in mechanics, Richard M. Sutton. 19: 330(A)—1951
- Simple apparatus for demonstrating the effect of the lack of dynamical balance of a rotating body, Lester I. Bockstahler. 4: 49(T)—1936
- Simple device for demonstrating the components of a vector, Wilfrid J. Jackson. 7: 67(A), 423—1939
- Some demonstrations of spinning tops and gyroscopes, Robert C. Colwell. 4: 203—1936
- Student laboratory and demonstration experiment on the measurement of mass and force by a kinetic method, Duane Roller. 3: 44(T)—1935
- Three demonstration experiments on rotatory motion, Richard M. Sutton. 6: 44(A)—1938
- Transformation of mechanical energy, demonstration of, Thomas J. Blisard and Charles H. Duursema. 20: 559—1952
- Two demonstration experiments on projectile motion, R. M. Sutton. 12: 133(T)—1944
- Yo-yo technics in teaching kinematics, Irving L. Kofsky. 19: 126—1951

Microwaves

- Elementary lecture demonstration with microwaves, William M. Fairbank. 18: 521(A)—1950
- Microwave demonstrations, Joseph W. Chasteen and Wallace A. Hilton. 20: 307—1952; T. B. Brown. 15: 432(T)—1947
- Microwave demonstrations in the teaching of physics, W. H. Pickering. 17: 164(T)—1949
- Microwave oscillator demonstration, D. E. Atkinson. 15: 432(T)—1947
- 10-cm waves, demonstration with, E. A. Yunker. 10: 211(T)—1942
- Use of microwaves in teaching physical optics, demonstrations of, C. L. Andrews. 14: 136(A)—1946; 15: 432(T)—1947; 17: 462(A)—1949

Nuclear Physics

- Alpha-particle scintillations, classroom demonstration of, Arthur Waltner. 15: 362(A)—1947; 16: 44—1948
- BF₃ counter, demonstration of, Dale Marvin Holm. 19: 397(A)—1951
- Geiger counter; radioactivity, using 20-in. lecture-room oscilloscope to show discharge, Staff of U. S. Naval Academy. 15: 432(T)—1947
- Hydrodynamic apparatus for demonstrations in radioactivity, J. L. Bohn and F. H. Nadig. 6: 284(T)—1938
- Hydrodynamic model for demonstrations in radioactivity, J. Lloyd Bohn and Francis H. Nadig. 6: 320—1938
- Laboratory and demonstration experiments on the law of radioactive decay and the determination of the disintegration constant of thoron, K. T. Bainbridge and J. C. Street. 6: 99—1938
- Mass spectrometer, demonstration, F. E. Christensen. 19: 59—1951
- Methods of dynamic atomic energy demonstration, J. L. Kuranz. 19: 398(T)—1951
- Model atomic bomb, Richard M. Sutton. 15: 198(T)—1947
- Models for Rutherford and Thomson scattering, I. Walterstein. 19: 400(T)—1951
- Mousetrap atomic bomb, Richard M. Sutton. 15: 427—1947
- Mousetrap bomb: modification $N + 1$, J. H. Manley. 16: 119—1948

- Nuclear demonstration model, M. Olsen. 19: 398(T)—1951
- Nuclear disintegration, demonstration model for, Richard M. Sutton. 2: 31(T)—1934
- Nuclear magnetic resonance, demonstration of, N. J. Hopkins. 17: 518(L)—1949
- Nuclear ray tracks, demonstrations of, Cecil O. Riggs. 19: 482(A)—1951
- Physical model to demonstrate nuclear and paramagnetic resonance, E. F. Carr and C. Kikuchi. 19: 486(A)—1951; 20: 110—1952
- Positron annihilation, demonstration experiment on, J. S. Levinger. 20: 71—1952
- Working model for showing nuclear disintegrations, Richard M. Sutton. 2: 115—1934

Properties of Matter

- Apparatus for demonstrating osmosis, H. D. Smith. 19: 400(T)—1951
- Capillary absorption due to surface tension, D. Owen. 1: 91(A)—1933
- Elastic and plastic properties, model to demonstrate, G. Goldfinger and C. B. Wendell, Jr. 13: 58(A)—1945
- Elasticity of glass, Laurence E. Dodd. 18: 398(L)—1950
- Elementary demonstration on the incompressibility of water and the elasticity of glass, Julius Sumner Miller. 18: 164(L)—1950
- Exhibits, aluminum samples (Recent publications). 7: 140—1939
- Model illustrating intercrystalline boundaries and plastic flow in metals, L. Bragg. 11: 51(A)—1943
- Notes on the demonstration of "wetter" water, C. R. Caryl. 8: 407(A)—1940
- Rubber band as demonstration equipment, M. H. Trytten. 8: 139(T)—1940
- Simple experiment to show the density anomaly of water, K. Wilde. 1: 93(A)—1933
- Simple method of crystal model construction, K. M. Seymour. 7: 205(A)—1939
- Soap bubble model of crystal structure, demonstration, F. C. Moesel. 18: 165(T)—1950
- Surface tension and its measurement, Allan Ferguson. 1: 90(A)—1933
- Surface tension, demonstration lecture on, Eric M. Rogers. 19: 328(T)—1951
- Tough soap films and bubbles, G. A. Cook. 7: 205(A)—1939
- Two novel surface tension experiments, Richard M. Sutton. 2: 31(T)—1934
- Unique density, nonmiscibility demonstration, R. E. Dunbar. 5: 239(A)—1937
- Use of gelatin and blackboard chalk specimens for elasticity demonstrations, Eric M. Rogers. 8: 70(A)—1940
- Waterproofing and wetting demonstrations, Eric M. Rogers. 11: 48(A)—1943

Vibrations and Waves

- Combination of two linear harmonic vibrations to produce a single elliptical vibration, interesting demonstration of, Robert W. Leonard. 5: 175—1937
- Composition of wave forms, A. D. Bulman. 14: 278(A)—1946
- Forced vibration demonstration apparatus with stroboscopic attachment, J. Lloyd Bohn and Francis H. Nadig. 9: 57(A)—1941
- Geometrical and graphical representations of Lissajous figures, Edward F. Fahy and Frank G. Karioris. 20: 121—1952
- Intermittent air-blast method of exciting transverse vibrations in a bar, B. W. Currie. 4: 201—1936
- Lissajous figures, apparatus for classroom demonstration of, Alvin W. Hanson. 7: 265(A)—1939
- Lissajous figures, demonstration apparatus for, Paul F. Gaehr. 9: 94—1941
- Lissajous' figures, demonstration of, G. E. F. Fertel and R. W. B. Stephens. 5: 223—1937; A. D. Bulman. 15: 435(A)—1947; P. A. B. Medgyessy. 17: 222—1949
- Mechanical vibrator for demonstrating standing waves, Wilfrid J. Jackson and Frank R. Pratt. 4: 49(A), 205—1936
- Melde's apparatus stroboscopically illuminated, George D. Rock. 7: 263(T)—1939
- Mercury ripples, demonstration of, J. A. Eldridge. 10: 269—1942
- New method for demonstrating the addition of two isochronous and perpendicular vibratory motions, Lutz Borello. 15: 93—1947
- Pendulums, demonstration experiments with, W. W. Sleator. 16: 93—1948
- Resonant pendulums, demonstrations on, Ancil Thomas. 19: 196(T)—1951
- Ripple tank using intermittent air jet, H. E. Carr and W. Connolly. 15: 432(T)—1947
- Running waves from standing waves, Arthur Taber Jones. 13: 419—1945
- Simple harmonic motion demonstrator, R. A. Hinshaw. 18: 395—1950
- Simple resonance demonstration, G. D. Rock. 9: 244(T)—1941
- Simple resonance spring, Thomas D. Phillips. 1: 92(A)—1933
- Some demonstrations of vibration, Schuyler M. Christian. 7: 265(T)—1939
- Standing-wave demonstrations, M. J. Pryor. 15: 195(A)—1947
- Standing waves, apparatus for demonstrating, Marvin J. Pryor. 13: 110—1945
- Standing waves, machine for demonstrating, Eldred F. Tubbs. 15: 513—1947
- Stroboscopic ripple tank as a teaching aid, Clarence A. Dyer. 5: 208—1937
- Subharmonic resonance, mechanical model for demonstrating, Carl A. Ludeke. 16: 430—1948
- Vibrating-string demonstration, R. C. Grubbs. 16: 254(A)—1948

- Visual demonstration of shm relations, F. L. Talbott. 12: 241(T)—1944
 Wave motion demonstration, Seth E. Elliott. 17: 459(T)—1949

X-rays

- Are x-ray tube demonstrations safe? R. Schlegel and J. C. Lee. 19: 470—1951
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